The AWA Journal

Quarterly Bulletin of the Antique Wireless Association, Inc.®
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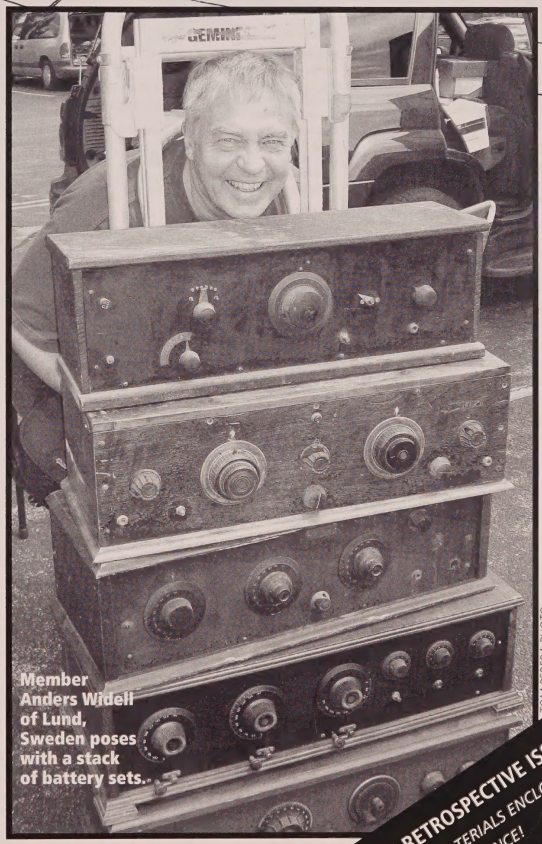

Member Anders Widell of Lund, Sweden poses with a stack of battery sets.

TOM PERERA PHOTO

CONFERENCE 2007 RETROSPECTIVE ISSUE
TIME-SENSITIVE PROXY MATERIALS ENCLOSED
PLEASE REVIEW AT ONCE!

Published for the radio collector, historian, restorer and all vintage communications enthusiasts.

Originally published as

THE OLD TIMER'S BULLETIN

OFFICIAL JOURNAL, ANTIQUE WIRELESS ASSOCIATION, INC.™

BRUCE L. KELLEY 1914-1997, FOUNDING EDITOR

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WHOM TO CONTACT

Please write legibly. Enclosing an SASE speeds replies.

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The Vacuum Tube
Ludwell A. Sibley

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The President's Message

The 2007 Annual Conference is now just a memory. I would like to thank all of the volunteers that made the conference possible. A very big **THANK YOU** goes to Chris and Bev Fandt for handling all of the pre-registration and conference registration. We could not have done it without you two. Bill Zakowski stepped in as always to help with the setup of the flea market and all other conference duties. Jane and Barney Wooters handled all of the monies for the meet. Rich Estes, with his brother John and sister Cindy, did a great job at the auction. Richard Neidich and crew did a great job as usual with the auction checkout. Many others helped with the meet, so if you see one of them add your thanks! They are: Bill and Fran Holly, Bill and Margie Fizette, Hutch Frederick, Ed Gable, Bruce Roloson, Lauren Peckham, Frank Fesko, Marc Ellis, Dick Ransley, Judy Deloria, Frank Rasada, Bob Dobush, and the Eplings.

I would also like to thank all of our speakers and presenters. The seminars and presentations are the heart of the conference. As it was pointed out to me many times at the meet, the AWA is the only conference that has this many quality programs. Our speakers this year were: Peter Yanczer, Brian Belanger, Dr. Alex Magoun, Bart Lee, Lloyd McIntyre, Fred Crews, Dwight Smith, Ray Chase, Lauren Peckham, Felicia Kreuzer, Marc Ellis, Ken Owens, Lane Upton, Floyd Engels, James O'Neil, Donna Halper, Tom Perera and Tim Walker. This year we had a keynote speaker for the Banquet. Mike Adams, Chair of the Department of Television, Radio, Film and Theatre at San Jose State University, came in to speak about Lee de Forest. I think we all learned something new about de Forest and we now have a new rating system to use. We all rated Mikes speech at "5 audions." Thank you Mike, for a wonderful time.

The contest this year brought in many rare and wonderful items. See the contest results in this issue. Many thanks to all that entered.

Mark these dates for next year's Conference:

August 20-23, 2008, Wednesday evening through Saturday afternoon. The theme will be: International Radio (non-U.S.-made radios).

We are an international group. It is about time we let the rest of the world show off their wares. So start working on your displays now. We already have a few speakers lined up. So if you want to present at next year's Conference just give me a call or email.

Thank you all for supporting this great organization. We are only as strong as our members. Well, enough for now. As always I am eager to hear from you. If you have any questions or comments feel free to contact me, but please no calls after 9:30 p.m. (eastern time), if possible.

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304-722-4690
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Letters to the Editor

All letters to the Editor are read with interest and attention, though not all can be published in this column. Letters may be paraphrased, shortened or otherwise edited to fit the available space. The statements made by our correspondents are their own opinions and do not necessarily reflect the views of either the AWA Journal *staff or the Antique Wireless Association.*

REVIEW REBUTTAL

As Bill Fizette's book review (July, 2007 *Journal*) suggests, members who read Erik Larson's *Thunderstruck* might appreciate its interwoven detail on Marconi's Signal Hill, South Wellfleet, and Glace Bay stations. But there are some controversial points that give pause.

One is a distorted time frame: Larson's "making it seem," as a New York Times reviewer said, "as if he's writing about concurrent events when they're separated by seven or eight years." Another is an unsubstantiated conclusion: that the Crippen case "did more to accelerate the acceptance of wireless as a practical tool than anything the Marconi company previously had attempted."

Dr. Crippen's wireless-assisted capture occurred in 1910. By then, Marconi's wireless—patented in 1897—had already had made headlines internationally for dramatic sea rescues, revolutionized weather and shipping reports, triggered an amateur wireless boom, slashed transatlantic message costs, and resulted in Marconi's receipt of the Nobel Prize in 1909.

Had historical accuracy been a primary con-

FROM THE EDITOR

Needed: More Member Involvement!

In last month's guest editorial, Allan Pellnat urged all members in a position to do so to donate time to our museum—either as docents (urgently needed) or members of a work crew. This month, we continue the theme of soliciting member involvement—this time for *The AWA Journal*.

Over the years, the *Journal* has earned an enviable reputation for publishing articles of both high quality and high interest. This has resulted from the partnership of our motivated members and our dedicated *Journal* staff.

The AWA enjoys a membership with a high percentage of talented and experienced people. Many of you have been quite used to writing articles or reports in your professional lives. Others may not have had this experience, but have still been driven to share their knowledge and

(continued on page 7)

Mike Adams, our conference Keynote Speaker this year and an avid photographer, managed to get this great shot of the Authors and Editors Seminar participants before we left the room. Looks like most of the editors are in the second row. Second and third from the left are Ken Owens and Bill Fizette, Journal *column editors. I'm fifth from the left and Bob Murray,* AWA Review *editor, is seventh. Charles Griffen, another* Journal *column editor is at the far right in the last row. Unfortunately, this all happened too quickly for us to get a list of names—so even though I know a number of the other people pictured, I'd rather not name them if I have to leave some out. —mfe*

cern, Larson might have consulted respected overviews such as Susan Douglas' *Inventing American Broadcasting* (Johns Hopkins, 1988).

ALFERD BALK
Huntley, IL
Author, *The Rise of Radio, from Marconi through the Golden Age*, McFarland, 2006

MARCONI'S SHORT-LIVED RECEIVING STATION

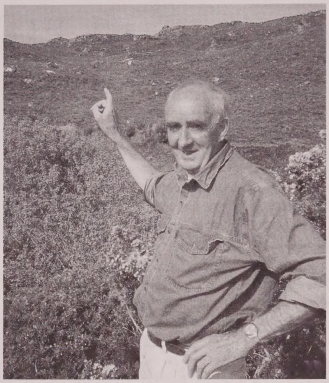
From a Letter Received by Bill Fizette

A few years ago, we celebrated the centenary of Marconi's first feeble wireless signal to North America. While everybody knows about Marconi's subsequent work, establishing the first commercial wireless telegraph station in Ireland linking Europe with America, few know about his receiving station, set up six years later. Certainly I wasn't aware of it until my friend Don Gibbons, a former Royal Air Force Radio Operator, recently drew my attention to it.

The transmitting station commenced operations in 1907 from Clifden in the extreme west of Ireland. Its establishment was a major industrial undertaking for the area, involving the construction of a 300 kW steam generating plant, the erection of lofty pylons to hold the aerials, and even a narrow gauge railway to deliver fuel.

But Marconi soon found that messages could not be transmitted and received simultaneously without cross-interference. After conducting successful tests, it was decided to relocate the receiving facility to a site on Currywongan mountain, some ten miles away. The signals would be relayed back to Clifden by land line.

I have seen some fascinating correspondence relating to the receiving station. For instance, though the contract documents called for a water turbine to provide electricity, a diesel generator



Gerry points to one of the Marconi receiving station antenna mast sites on Currywongan Mountain.

One of the remaining receiving station antenna mast anchor points.

was installed instead.

Letters from works manager G.S.Kemp to Marconi describe the difficulties involved in erecting high masts on such terrain. In December 1911 he wrote—"We have had a terrible experience here during the past five or six weeks gales. The foreman cannot be sure of erecting more than one cylinder per week to complete the 300 ft. mast. Rain and hail storms have brought us to very short days, more uncertain weather and every chance of a loss to the present costly height, by a sudden squall during erection operations." (The masts were erected in semi-cylindrical six foot sections. See *The OTB* for August 2001, p. 45.)

Progress in wireless communications soon rendered the receiving station obsolete and it was closed in 1916 after only three years of operation. Marconi's Irish operations closed permanently in 1922 after being wrecked during the Troubles *(periods of civil unrest—ed)*.

Veldon's Bar in the village of Letterfrack has an excellent display of photographs relating to the receiving station, including shots of the teams of donkeys, and of men, used to haul materials for the masts up the hills.

GERRY BRACKEN
Co. Mayo, Ireland

(For a related article, see "Marconi and the Telegraph Companies" elsewhere in this issue. —ed.)

SPEAKER MYSTERY SOLVED

From a Letter Received by Dave Crocker

I was very happy to see your article "The Qualitone Horn Speaker" in the Radio Reproducers column for July '07. I have had one of these speakers for several years, and now I know that it is a model lR. Mine has both "tone chambers" intact but the cone is not in as good condition as the one you have pictured.

It also has no name, plate or decal of any kind on it and no signs of one ever having been present. In your article, you mention the green felt on the bottom of the base. There is no felt on mine, or any sign that it had ever been there. Perhaps, at some time in the past 80 plus years, someone added the felt to yours?

The enclosed picture of my model lR shows that, at the rear, there is a rubber grommet for the headphone to seal against. I don't see it on the one you have pictured but it seems to appear in the drawing at the lower left of the original ad. Maybe felt or grommets varied in different production runs?

Rear of Al McChesney's speaker showing rubber grommet.

Thanks very much for shedding some light on this old horn for me. I have enjoyed collecting antique radios and speakers for nearly 40 years and it is especially pleasing to put a name on what had been unknown.

Al MCCHESNEY, N2ZHS
Scotia, NY

FROM THE EDITOR, *cont. from p. 5*

write about their projects.

Once your manuscripts are received at the *Journal*, we do our very best to process them for editorial clarity and provide professional, attractive layouts. The result has been the quality publication of which we are all proud.

But after a short period, several issues back, when the number of submitted manuscripts peaked, they began to decline. Now we are receiving manuscripts perhaps not quite as fast as they are being published. I brought this up for discussion at the lively "Authors and Editors" meeting held at our recent Rochester Conference.

Though there was some valuable interchange on use of copyrighted material, article length and article format, I didn't come away with any offers to write articles. There were, however, several suggestions on how to boost *Journal* content—most involving reprinting from sources such as other clubs and vintage publications.

While I have used, and will continue to use, occasional interesting reprints from other sources—especially the *ARCA Gazette*, a publication that became our property when we merged with the Antique Radio Club of America—I wouldn't care to include reprints in the *Journal* as a matter of regular policy. This would move us away from our very successful mission of providing a first-class publishing venue for the AWA membership.

And so, gentle readers, if you have an idea you've been planning to write up for the *Journal* "some day," now is definitely the time to sit down and do it! We also have openings for at least one columnist—so if there is an area of our hobby that you especially love, and you might be interested in sending us a short article about it for each issue, be sure to contact me! You'll find complete contact information under "*Journal* Submissions" on page 2.

And while I'm encouraging you to contribute to the *Journal*, I want to be sure to mention the need for contributing your restoration tips and techniques to Ken Owens' "Equipment Restoration" column. This column is almost entirely dependent on reader input—but the column did not appear in this year's January or July issue because there was none. Ken's contact information will be found at the head of his column in this issue.—Marc Ellis

About Our Authors

JEFF DUNTEMANN
12-Volt Space Charge Tubes
(In "Breadboarding")

Jeff is a writer, editor, and electronics tech who has been building with tubes since 1964. He was first licensed as WN9MQY in 1973, and currently holds the call K7JPD. He worked as a service tech and computer programmer for Xerox, and later as a technical editor for Ziff-Davis Publishing and Coriolis Group Books. He has written twelve books: ten focused on computing, plus one SF novel. He lives with his wife Carol in Colorado Springs, Colorado. See his Web site at www.duntemann.com.

LATEN H. FETTERS
A Blue Sky Solution to an Experimental Problem

Laten built his first radio, a crystal set, in 1935 at the age of nine, followed by a two-tube short wave receiver and a five-meter transceiver. After a stint in WWII and eight years in the television servicing field came a complete career with Westinghouse—eight years in research, eight years in astro nuclear, and 18 years with transportation system engineering. Then transit equipment consulting followed a very short retirement of three weeks.

Born and raised in Pittsburgh, PA, his main interests center on the restoration of antique radios, the Pittsburgh Antique Radio Society, fishing and the Pittsburgh Steelers.

GENE GARRISON
Liberty Ships and Victory Ships – and –
The RCA Radiomarine Corporation Model AR 8506B Liberty Ship and Victory Ship Receiver (In "The Communications Receiver")

Gene's career in radio began at WFBC Radio and TV, NBC Channel 4, in Greenville, SC, while he was a high school student. Following graduation from Clemson University, in 1963, he was commissioned in the U.S. Army

He served in the U.S. Army Security Agency, at posts in West Germany and the United States. In 1970, he began a civilian career with the U.S. Army Security Agency (which later became a part of the Army's Intelligence and Security Command [INSCOM]). He was based at Vint Hill Farms Station, Warrenton, VA.

(continued on page 14)

AWA NEWS

***AWA JOURNAL* POLICY ON PROMOTING EVENTS:** The *AWA Journal* is pleased to list the meets and meetings of any established antique radio organization, whether or not it is associated with the AWA. Send your information to Marc Ellis, Editor, *AWA Journal*, P.O. Box 1306, Evanston, IL 60204-1306. E-mail mfellis@alum.mit.edu. Closing date is six weeks prior to first day of month of issue.

Calendar of AWA Activities

October 20
CC-AWA Saturday Morning Swap Meet

November 11
AWA, Inc. Membership and Board Meetings

November 11
AWA Museum Membership and Board Meetings

November 16-18
VRPS/AWA Annual Convention

December 1-2 & 8-9
Bruce Kelley Memorial 1929 QSO Party

January 26, 2008
CC-AWA Saturday Morning Swap Meet

March 20-22, 2008
CC-AWA Annual Conference

Calendar of Meets

(AWA logo identifies AWA-sponsored events)

CC-AWA SATURDAY MORNING SWAP MEET

October 20

At City Lake Park in Jamestown NC. All Saturday morning swap meets have FREE admission and Vendor setup is only $5. Details for all events can be found on our web page at cc-awa.org. For more information contact CC-AWA President, Ron Lawrence KC4YOY, P.O. Box 3015, Matthews, NC 28106-3015, 704-516-8819, kc4yoy@carolina.rr.com

AWA, INC MEMBERSHIP AND BOARD MEETING

November 11

At the new A.W.A. Electronic Communication Museum "Building 2," which is located behind the present antiques mall (eventually to become Museum Building 1) located at 6925 Routes 5 and 20 (at the intersection of Route 444), Bloomfield, NY. Membership meeting at 11 a.m. All members welcome. Board meeting follows.

AWA MUSEUM MEMBERSHIP AND BOARD MEETING

November 11

Same location as above. Membership meeting (all members welcome), followed by board meeting, begins at conclusion of AWA, Inc. Board Meeting.

VRPS/AWA ANNUAL CONVENTION

November 16-18

At the Hampton Inn and Suites, 1700 Rodeo Drive, Mesquite, TX 5149. Info: www.vrps.org

BRUCE KELLEY MEMORIAL 1929 QSO PARTY

December 1-2 and 8-9

See Amateur Radio column in this issue for details.

CC-AWA SATURDAY MORNING SWAP MEET

January 26, 2008

at Caughman Rd. Park in Columbia, SC. Details in writeup for October 20, meet.

CC-AWA ANNUAL CONFERENCE

March 20-22, 2008

In Charlotte, NC at the Sheraton Charlotte Airport Hotel. See also writeup for October 20 meet.

Recurring Meetings & Events

• Antique Radio Collectors of Ohio—meets first Tuesday of each month at 2929 Hazelwood Ave., Dayton, OH (4 blocks east of Shroyer Rd. off Dorothy Lane) at 7 p.m. Also annual swap meet and show. Membership: $10.00 per year. For more info, contact Karl Koogle: mail to above address; phone (937) 294-8960; e-mail KARLKRAD@GEMAIR.COM

• California Historical Radio Society—For info on current meetings, call the CHRS hotline: (415) 821-9800.

• CARS, the Cincinnati Antique Radio Society—Meets on the third Wednesday of each month at Gray's History of Wireless Museum, which is part of The National Voice of America Museum of Broadcasting, Inc., located in a building that is now on the National Historic Register at 8070 Tylersville Road, Westchester, Ohio. 45069. For more information contact Tina Hauke at (513) 247-9406.

• Carolinas Chapter of the AWA—Hosts four "mini-swap-meets" each year (in January, May,

July and October) plus an annual conference, "Spring Meet in the Carolinas," on the 4th weekend in March. Executive committee meets approximately quarterly. For more info, visit the web site at CC-AWA.ORG or contact Ron Lawrence, KC4YOY, Chapter President, P.O. Box 3015, Matthews, NC 28106-3015; phone (704) 289-1166; e-mail kc4yoy@carolina. rr.com

• Central Ohio Antique Radio Assn.—Meets at 7:30 p.m., third Wednesday of each month at Devry Institute of Technology, 1350 Alum Creek Rd., Columbus. (1-70 Exit 103B). Contact: Barry Gould (614) 777-8534.

• Delaware Valley Historic Radio Club—Meeting and auction begins 7:30 p.m. on the second Tuesday of each month. Location: Telford Community Center on Hamlin Ave. in Telford, PA. Annual dues: $15.00, which includes a subscription to the club's monthly newsletter *The Oscillator*. For more info contact Delaware Valley Historic Radio Club, P.O. Box 5053, New Britain, PA 18901. Phone (215) 345-4248.

• Houston Vintage Radio Association (HVRA)—Meets monthly on the second Tuesday (April thru Oct) at Bayland Park, 6:30-9 p.m. in SW Houston. March and November meetings are held on Saturdays at the American Legion Hall off Alba Street in North Houston at 9 AM. Each meeting includes an auction and program. Two one day auctions are held each spring and fall. An annual convention is held in February. A newsletter, *The Grid Leak*, is published monthly. Membership is $20/yr. Website: www.HVRA.org. Write: HVRA, P.O. Box 31276, 77231-1276 or call Bill Werzner 713-721-2242 (e-mail: mingqi53@sbcglobal.net).

• Hudson Valley Antique Radio & Phono Society—Meets third Thursday of month, 7 p.m. Meeting, swap meet, and membership info: Peter DeAngelo, President, HARPS, 25 Co. Rt. 51, Campbell Hall, NY 10916. (914) 496-5130.

• Indiana Historical Radio Society—-Meets quarterly in Feb., May, Aug. and Oct. Flea market, old equipment contest and auction at all events. The IHRS Bulletin has been published quarterly since 1971. For meet details and information about the club and our Indiana Historic Radio Museum in Ligonier, IN. see our web site at www.indianahistoricalradio.org, contact Herman Gross, W9ITT, at 1705 Gordon Dr., Kokomo, IN 46902-5977 (765) 459-8308, or email w9itt@sbcglobal.net.

• London Vintage Radio Club—This Ontario, Canada club meets in London on the first Saturday of January, March, May, June and November. Annual flea market held in Guelph, Ontario in September in conjunction with the Toronto club. Contact: Lloyd Swackhammer, VE3IIA, RR#2, Alma, Ontario, Canada N0B1A0. (519) 638-2827. E-mail contact is Nathan Luo at lvrceditor@yahoo.com.

• Mid-Atlantic Antique Radio Club (MAARC)—Meets monthly, usually on the third Sunday of the month at the Davidsonville Family Recreation Center in Davidsonville, MD. (But meets once or twice a year in Northern Virginia—check web site for schedules, details and maps). Contacts: President, Geoff Shearer, 14408 Brookmere Dr., Centreville, VA 20120, 703-818-2686 e-mail gshearer@cox.net; Membership Chair, Paul Farmer, 540- 987-8759, e-mail: oldradiotime@hotmail.com. Website www.maarc.org

• New Jersey Antique Radio Club—Meets second Friday each month, 7:30 p.m. Holds three annual swap meets.Visit the website, www.njarc.org or contact Phil Vourtsis, 13 CornellPl., Manalapan, NJ 07726, (732) 446-2427, pvourtsis@optonline.net.

• Northland Antique Radio Club—hosts four events with swap meets each year (in February, May, September and November) including an annual conference, "Radio Daze," for two days in mid-May. Annual dues are $12.00, which includes a subscription to the club's quarterly newsletter. For more info, visit our web site at www.geocities.com/northland.geo/; contact Ed

AWA LIFE MEMBERSHIPS ARE NOW AVAILABLE

Cost: $400 (U.S.), $500 (elsewhere). Make out your check to Antique Wireless Association and send it to AWA Membership, P.O. Box 421, Bloomfield, NY 14469-0421. E-mail awamembership@rochester.rr.com.

50TH ANNIVERSARY COMMEMORATIVE BOOKLET

Our 50th anniversary commemorative booklet *Fifty Years of AWA* has received high marks from everyone who has seen it. We still have a stock of this profusely-illustrated 60-page AWA history available for those who would like extra copies or those who were not members at the time of distribution and didn't receive one. Cost is $7.00 per copy postpaid, no limit. But once they're gone they're gone—so act now if you are interested! Send your check to Antique Wireless Association, Box 421, Bloomfield, NY 14469-0431.

Ripley at (651) 457-0085; or write NARC, P.O. Box 18362, Minneapolis, MN 55418.

• Northwest Vintage Radio Society—Meets second Saturday of each month at or about 10 a.m., at Abemathy Grange Hall, 15745 S. Harley Ave., Oregon City, OR. Members display radios, exchange information. Guests welcome at all meetings and functions, except board meetings. For info, write the Society at P.O. Box 82379, Portland, Oregon 97282-0379.

• Oklahoma Vintage Radio Collectors—Oklahoma City Chapter meets second Saturday each month at Hometown Buffet, 3900 N.W. 63rd St., Oklahoma City, OK. Visitors welcome. Dinner/socializing, 6 p.m.; meeting at 7 p.m. Membership, $12/yr., includes monthly *Broadcast News*. Info: SASE to OKVRC, P.O. Box 50625, Midwest City, OK 73140-5625; or contact Fred Karner at (405) 769-4656 or fkarner@cox.net; or visit our website at http://members.cox.net/okvrc/

• Ottawa Vintage Radio Club—Meets monthly (except June and July) in the Conference Room, *Ottawa Citizen*, 1101 Baxter Rd., Ottawa, Ontario, Canada. Contact: Lea Barker at (613) 829-1804 or check www.ovrc.org. Membership: $10 Canadian/yr.

• Pittsburgh Antique Radio Society welcomes visitors to our Saturday flea market/contests in March, June, September, and December. A

(continued on page 12)

AWA NETS

(EASTERN TIME)

PHONE

SUNDAY:
7237 kHz, SSB, noon (NCS:VARIOUS);
3837 kHz, AM 4:00 p.m.
(NCSs: KA2J & W2AN)

TUESDAY:
14274 kHz, SSB, 2:30 p.m. (NCSs: KC3YE and W0FXY)
3837 kHz SSB, 8 p.m. (NCS: WB2SYQ)

MONDAY-WEDNESDAY-FRIDAY:
The AWA Bruce Kelley HF Net
3837 kHz +/- kHz, SSB, 9:30 a.m. (NCS: W2OBJ)

CW

DAILY, 4 p.m., 3588 or 7050 kHz. Protocol, informal. Check both frequencies for activity and join in, or call AWA de (your call) and see what you stir up. First WEDNESDAY of each month, 8 p.m., 7050 kHz

2-M REPEATER (Rochester Area)

MONDAY, 7:30 p.m. (NCS: K2WZS)
Receive 145.290 MHz
Transmit 144.690 MHz

The following are nominated to become Directors of AWA, Inc.. (See voting proxy included with this issue):

David Bart, KB9YPD was born in Champaign, Illinois in 1962. He is a graduate of the University of Chicago where he received a BA degree in Anthropology and Statistics in 1985 and a Masters in Business Administration in 1993. He is a financial consultant and an expert witness in corporate bankruptcy and commercial litigation. David has had a strong interest in the history of science and communication since childhood and has collected radio, telephone and telegraph devices for over 20 years. He has been a member of the AWA for more than 18 years. He is also President of the Antique Radio Club of Illinois and an active member of the Michigan Antique Radio Club and the Indiana Historical Radio society. In addition, he serves as Curator of the Radio and Television Collections in the Museum of Broadcast Communications in Chicago. David and his wife Julia, are the parents of two sons, John and Michael.

John Terrey, W5DTQ is a native of Texas. He developed an interest in radio at an early age and obtained his amateur radio license at age of 13. John graduated from MIT in Electrical Engineering in 1962. In 1968, he received Masters Degrees from MIT in both Electronic Engineering and Management. He worked for over twenty years in electronics, missiles, solar energy, air traffic control systems, and econometrics. John's radio collecting began in 1962 and his current collection consists of over 1000 items—featuring pre-1925 broadcast sets. He has been active in the radio collecting community for over twenty-five years and has served on the boards of the Antique Radio Club of America and the Antique Wireless Association, where he was chair of the Houck Award committee. Currently, John is publisher of *Antique Radio Classified,* the leading, independent, monthly publication for radio collectors.

MUSEUM NEWS

Visit us on the Internet at http://www.antiquewireless.org

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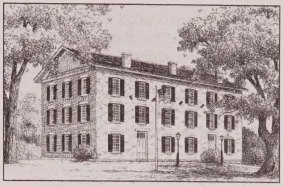
Ronald Roach, W2FUI
Ronald Walker, WA2TT
Morgan Wesson
Roy Wildermuth, W3RLW

**also on AWA Inc. Board of Directors*



MUSEUM CONTACT

For all inquiries about the Museum and its operation, contact Museum Curator Edward M. Gable, 187 Lighthouse Rd., Hilton, NY 14468. Phone: (585) 392-3088, e-mail: egable@rochester.rr.com. *The AWA Electronic Communication Museum is an IRS 501(c)3 charitable organization.*

Welcome again from your museum crew. The gang is still very busy with the move. The library is shaping up nicely and should be nearing completion by press time. Arrangements have been made to access the storage facilities below the library in Building 2 so we can move some hardware out of the Annex into storage.

That will allow moving shelving from the Annex to the new facility. That will make room in the Annex for additional workspace needed for sorting and inventorying. That will make room for… well, you get the idea. The sequence of operations is really important here and your crew has responded well to the planning and attention to details for what is a real exercise in program management.

We are still recovering from the Conference. Say, what a great time it was! We're all concerned with the reduction in attendance and your club is working on that, but there sure wasn't any diminishment in quality. The flea market was exciting with interesting items to be found at every turn, the contest was top notch, the seminars were very well presented and informative and the auction fun for buyer and seller.

The museum is always grateful for the many folks who take this opportunity to donate items. In fact, donations are on the rise as you can see from the donor list in this report. I want to thank many of you who took the time to make cash donations in memory of Helen Kelley and past AWA Board member Jim Frederick.

Those not attending the conference missed the opportunity to grab a copy of the all new *AWA Review #20*. Editor Bob Murray did an outstanding job of selecting articles of varying interest and of impeccable original research and reporting. I don't know how he did it, but the new review has a new look, better print for easier reading, more pages and no increase in price. A bargain at $15.00, postage paid. See the ordering information elsewhere in this issue.

And finally, I have to say that it was ten years ago that then AWA President Bill Fizette met with me and did everything but beg me to accept the position of Curator. Our dear AWA cofounder and museum curator Bruce Kelley was in a hospice situation and finding a replacement was critical. I agreed to act in that position for three years. Now, ten years later, and after more than 25 years on the AWA Board, I am stepping down from all titled positions in both the museum and the club.

This is not news, of course, as I started preparations for stepping down almost three years ago and turned in my formal written resignations at the Board and Trustee meetings last November, to be effective in November, 2007. But, I'm not going anywhere. I'll still be as active as ever and will support the museum and club as needed. I just won't be leaving to open the Annex each and every Tuesday at 5:45 a.m. I'll be happy to let the younger crowd do that.

I look forward to the museum move and hope to be involved with the design and construction of numerous displays. I also look forward to working on a personal collection again. Because of the conflict of interest rules associated with being Curator of a New York State Chartered museum, I have been unable to work on a personal radio collection. I really missed that.

I feel good about the improvements instituted over the last ten years. These include the more

formalized organization, the documented operating procedures, the improvements in the museum itself, the addition of a Director and an Operations Manager, and so forth. There is still a lot to do and I'm hoping to be a part of that, just not in any official manner.

I suspect the museum Board of Trustees will be announcing their choice of a successor very soon. So this will be my last contribution to the *Museum News Column*. Thanks to Marc Ellis for his never ending job of editing and making my writing actually look good. Now I'll sign off as always with—S'long for now from your museum crew.

Ed Gable

Edward Gable K2MP
Museum Curator

RECENT MUSEUM DONORS

- Johnathan Bouvé .....Documentation, Reginald A. Fessenden memorabilia
- Tom Perera, W1TP.....Early British needle telegraph set circa 1880
- Bob Raide, W2ZM.....RCA AM broadcast transmitter, RCA 250W
- Leslie Moore .....1924 USA radio map
- Tom Sharp, N2BOO.....Antenna tuner, components
- Bill Fizette, W2DGB.....Federal Telegraph and Radio Corp RC123 RX
- David Bart.....Framed print "The Great Eastern," autoCall printing recorder
- Ronald Thomas.....Books and advertising literature
- Robert Erskin, W2NVZ.....Large collection of television broadcasting items, both hardware and manuals
- Ralph Reichkart.....1937 Chrysler car radio
- Preston Durkee.....About 250 common radio/TV tubes
- John Poulton, K4OZY.....Teletype Corp M-14 non-typing reperforator
- Mr. and Mrs. Charles Cagin ....Philco 46-1226 console
- Seth Silverstein, K2DIW.....Viking II w/VFO, ICOM 25A, Yaesu FT-209, more
- William Kelly.....VHF and UHF antennas, Zenith Satellite down converter
- The Kennedy Family.....RU-16 with coil set, EE8 telephones, much more
- Jim and Felicia Kreuzer.....Two type UV-851 vacuum tubes, display,
- Frank Decker.....About 50 common radio/TV tubes—and some NIB 1L6's!
- Robert Nolan .....Admiral 19A11S seven inch table top TV
- Robert Hobday, N2EVG .....Three Toshiba lap top computers, all checked and working
- John Winans, WA2LGE.....A-K Breadboard, similar to model 9, but early home brew
- Victor Szatkowski .....RCA 75X17, hand painted Japanese motif
- David Thorn.....Large collection shirt pocket transistors, table radios, more

Cash Gifts

- Brian Belanger
- Ronald Frisbie
- Ed Gable
- Rochester Section IEEE
- Harris Corporation
- H. Turk
- Friends of Helen Kelley
- Friends of James Frederick

Compiled by Ed Gable.

AWA NEWS, *cont. from p. 10*

donation auction is included in September, and our annual luncheon/program is held the first Saturday in December. Our newsletter, *The Pittsburgh Oscillator*, is published quarterly. Website: www.pittantiqueradios.org. For directions or other information call President Regis Flaherty, 724-969-0643 (email: flaherty@netscape. com) or Vice President Bonnie Novak at 412-481-1563 (e-mail radiolady_2001@libcom. com.)

• Society for Preservation of Antique Radio Knowledge (SPARK)—Meets at 7:00 p.m. monthly at Donato's Pizzeria, 7912 Paragon Rd., Centerville, OH. Annual swap meet. Membership, $18/year. Write SPARK Inc, P.O. Box 292111, Kettering, OH 45429; e-mail sparkinc@juno.com or call John Pansing at (937) 299-9570.

• Texas Antique Radio Club—Meets alternate months in Kyle and Shertz, TX. Contact: Doug Wright, 625 Rolling Hills Dr., Canyon Lake, TX 78133. e-mail dwjw@gvtc.com; website www.gvtc.com/~edengel/TARC.htm

EDITED BY **LUDWELL A. SIBLEY**, 102 MCDONOUGH RD., GOLD HILL, OR 97525-9626

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RCA's Bureau of Investigation

What did J. Edgar Hoover, the state of Georgia, and RCA have in common? Well, it seems that they each had a Bureau of Investigation.

This possibility came up a while ago when collector Robert Lozier sent in a photo of three new-old-stock tube cartons that he had gotten at Rochester. The boxes contained Type 27s under the brand names Actron, Hygrade, and La Salle. The end flap of each was machine-stamped RECEIVED/AUG 12 1930 1237 PM/BUREAU OF INVESTIGATION. He naturally wondered what their source might have been.

On distribution of the request within the tube-collecting community, reports turned up of other cartons with typed paste-on labels. The notations were things like *Evid. 1069 J… Cleartron CTX120 tube purchased by Joseph Marck from W. Cohen, 25 Concord St., Newark, N. J. Case 986.* Another read *Evid 1017-E/Ergon EX226 tube purchased from Fed. Radio Store/10/ 21/30 Case 884*, also with the "Bureau" stamp. A third case is *Strong, Harry 260 W. 34th St N. Y.; Tube #71(2) purchased by C2 Oct 11th 1923.* There were several others. Additional purchasers were "C.F.B.," "M5," and "SA2," the latter being a code for the above mentioned Joseph Marck. It's not hard to guess that "SA" stood for "Special Agent."

Some more of the obscure brand names appearing on "evidence" cartons were Gold Tone, Peertron, Rectron, QRS, and Schickerling.

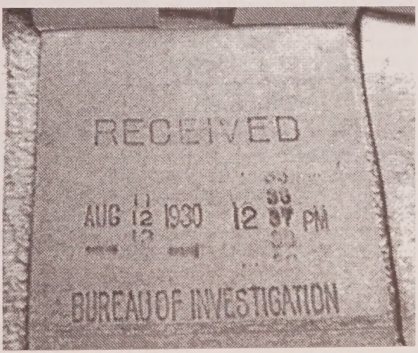
It is believed that all these tubes, now dispersed widely, originated in the famous three-carload "save" of tubes from the Princeton, NJ town dump by the late Howard Schrader. The RCA patent department had moved to the RAC Laboratory buildings at Princeton when it opened and did a clean-out in the mid-'40s.

While RCA certainly did its share of "restraint of trade," we can't point fingers in this case. The company had the right and obligation to defend its (and GE's, Westinghouse's, etc.) patent rights against infringing tubemakers. There is a principle in law that if a patentee knows that infringement is occurring and takes no action to enforce its rights, the patent becomes invalid.

As a parallel but later case, Eitel-McCullough had a patent portfolio of its own and licensed other manufacturers to use its technology. In the late '50s, the company's managers developed a suspicion that General Electronics was under-reporting its sales of tubes and therefore cheating in its royalty payments to Eimac. The case focused on some 3C24 power triodes that General was making for the Government. Eimac "quietly" obtained a couple of those 3C24s, opened them up, recognized the patented construction, and filed suit. The resulting settlement was small ($3000) but the principle was upheld.

The Newark area was the hub of small tubemakers and therefore of RCA's investigations. Gerald Tyne expresses wonderment in his *Saga of the Vacuum Tube* at the ability of the small makers, upon being legally enjoined from patent violation, to disappear and immediately set up in a new location with a new name. There was plenty of market opportunity for tube sellers, with or without an RCA license. The sales of tubes went from 1.3 million in 1923, to 4.3 million the next year, to 11.4 million in 1924.

If one goes through the issues of the *Radio*



Trade Directory issues for 1924 and 1925 and the *Saga*, about 75 tube vendors turn up in Newark, a city of only 200,000 at the time. This is a cumulative count; they didn't exist simultaneously. Nor are they necessarily manufacturers; some were probably distributors with their own brand names. If one plots their addresses on a city map, 26 firms appear in a single square mile downtown. It is clear that RCA's patent spooks had plenty to do. One can hypothesize that in the Newark of the '20s, every fifth basement was a source of bootleg tubes or, courtesy of the Dutch Schultz mob, bootleg beer.

The James Bond aspect of the agents reflects itself in a couple of Special Reports in "Case 1272" from 1932, this case being litigation between RCA and Dubilier over a patent obtained by the inventor Harry Houck. The investigating agent set out "to obtain data in connection with filament characteristics of various vacuum tubes manufactured by the Westinghouse Electric Company" from the factories at Bloomfield, NJ and East Pittsburgh. This is straight paralegal/engineering work, clearly intended for intradepartmental use. Yet the reports have no signature, and were prepared by "SA#1!" Two more Special Reports by this mysterious figure dealt with the dates of introduction of the UX-226 and UX-245 tubes—rather innocent stuff. There are numerous others.

The need for undercover "market research" more or less disappeared during the Depression. The small tubemakers suffered from the effects of the Depression, including price cuts by the larger companies. Additionally, the tubes became more complex and the number of types kept expanding. The party was over by about 1932.

Besides Robert Lozier, information on this topic came from long-time collectors Alan Douglas, Sterling Jensen, and Fin Stewart. Jerry Vanicek, in addition to supplying the marked Cleartron carton, loaned files containing the reports of "SA#1." Information on Eimac's patent suit is in the legal-department files in the Perham-Eimac Archive, a holding of History San Jose.

ABOUT OUR AUTHORS, *cont. from p. 7*

In 1985, he transferred to the U.S. Information Agency, where he held a position in the Engineering Office of the Voice of America. He retired in 2000, after 15 years managing technical and logistical support for VOA's worldwide network of radio broadcasting facilities.

Gene holds an Amateur Extra license as K4KSU, a call he has held since 1956. He earned a Radiotelephone First Class license in 1961. Gene is a Life Member of the Society of Broadcast Engineers, a Life Member of the Association of Federal Communications Consulting Engineers, and a long time member of the AWA. His primary interest in vintage radio is World War II era HF receivers. Gene and his wife, Carolyn, live near Washington, DC, in Warrenton, VA. They have three married daughters and six grandchildren.

IVOR HUGHES

Marconi and the Telegraph Companies

Ivor has been a wireless enthusiast since his teens in the 1950s, when he turned his bedroom into a repository for a chaotic collection of surplus World War II gear. One of his first construction projects was a short wave wireless receiver. When the radio turned out to be an effective neighborhood TV jammer, it set him to thinking that there was a lot more to the subject than meets the eye.

He eventually became hooked on a career in electronics. Ivor spent his early years in the UK where he received a BSEE and then entered the aircraft electronics industry. He moved to this country during the 1960 boom years and spent the rest of his career in avionics system design. Now retired, he enjoys delving into the history and technology of early telegraph and wireless systems.

ALLAN PELLNAT, KX2H

The Voyage of the Seth Parker

Allan has been a licensed radio amateur for over fifty years. He has been a member of the museum volunteer workforce since his retirement in 1998 and is a member of the AWA board of directors and the museum's board of trustees. He also serves as deputy director of the museum. Allan's working career began with AT&T as a Telegraph Serviceman and ended with Nortel Networks as a systems engineer working on automated directory assistance services. Since moving to North Carolina a few years ago, he has been researching the links between the early ham radio community in his new hometown of Wilmington and the development of broadcasting in that area.

BY LARRY BABCOCK

Photos by the author.

THE 2007 ROCHESTER CONFERENCE: ONE MAN'S IMPRESSIONS

What a fine welcome I had coming to this meet. An attractive lady came up to me, threw her arms around me, and said that she hadn't seen me for a very long time. But she didn't mention my name and I don't remember ever seeing her before!

For several years now the conference has started with a free "Member's Mixer" on the eve of the event. Hors d'oeuvres are served and a cash bar is available. It's a nice, relaxed way to kick off the event and get reacquainted with friends.

The Flea Market

The flea market opened the following morning at 6:00 a.m., while it was still dark. It didn't take me long to make my first purchase. It was a telegraph key to go with my World War I SCR 65 aircraft spark transmitter. I had first seen this key at our meet several years ago but with a price of $1,000. Many prices were much lower this year and I was able to buy the same key for $450!

Though the flea market was smaller this year, all but one of the vendors I talked with said they were very satisfied with their sales.

I think some of the empty flea market spaces were there because members bought spaces strictly for parking. However, I can tell you that there is now plenty of free parking for everyone attending the meet.

Among the more interesting offerings and their asking prices were a rare World War I aircraft radio power distribution box ($400); Peter Pan cathedral in beautiful condition ($1,100); 1939 New York World's Fair with Trylon and Perisphere molded into the wood grill, also in fine condition ($1495); Charlie McCarthy novelty radio ($1,000); Model 447 AK, like new ($775); two Crosley repwood cathedrals at $375 and $695—though they looked quite similar; Navy SE1420C receiver in good condition ($4800).

Merrill Bancroft was showing off a seldom seen Federal #145 purchased at the meet. Matt Kurzdorfer showed a rare Federal gooseneck horn and a very rare Federal #60 tuner. The tuner was first offered in 1922, before Federal made their first complete radio. It contained no tubes, but could be used with the model 55, which contained two stages of RF amplification, followed by the #8 detector with one stage of audio. Matt also displayed Two Federal Pliophone horns and an extremely rare Mignon RCI, which was used by jewelers in 1922 to receive time signals. These items were not for sale—just for display.

Early Colonial Globe radio sits behind an early Kennedy on one of the auction inspection tables.

The Seminars

There were a total of 14 seminars and I went to about ten of them. Most of the seminars had an attendance of over 100 people. All were very interesting and presented by speakers that were the top people in their fields. In the first seminar, directly following the mixer on Wednesday evening, Tom Perera told about Phil Weingarten and his remarkable fake artifacts.

Phil was a master craftsman with a

dishonest streak. He often neglected to tell buyers of his repro objects that they were not originals. Once he told a widow that her husband wanted his valuable wireless objects to go to him, then went to her house and collected them. Since they had, in fact, been promised to the AWA, Bruce Kelley was infuriated and threw him out of the club!

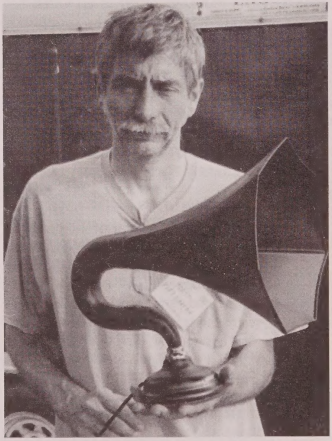
Now an antiques mall, this building will be the new home of the A.W.A. Electronic Communication Museum. The library is now being transferred to the auxiliary structure at the rear.

Tom has put the PowerPoint slide show and lecture notes for the Weingarten presentation on his web site. Download the slide show at w1tp.com/ temp/pw7.ppt. This is a 19MB file, so you'll need a fast connection. Download the notes and commentary at w1tp.com/temp/ pw7.doc.

Pete Yanczer gave his usual excellent presentation on early mechanical television early Thursday morning. The title was "Television 1928 – What Was it Like?" His 32-line mirror screw display system produced a large 4"×5" bright picture which I was easily able to view from half way back in the audience.

The viewing angle was 150 degrees, so the entire audience was able to view the image head on from where they sat or by moving just a few feet. I know of no other TV display concept that can show you a full width image regardless of your location in the room. It can even display images in color!

About 40 people attended the AWA Member's Forum. President Geoff Bourne discussed the club's plans and gave the audience a chance to ask questions and give suggestions. A prime topic was the need to increase membership.



Matt Kurzdorfer displayed his elegant and rare Federal horn at the flea makrket.

Geoff said that, this year, members of the ARRL were permitted to attend the conference without joining the AWA and that plans are being made for next year to extend this privilege to other radio clubs. Geoff also said that more flea market table spaces were sold this year than last, which is encouraging.

A large group attended Brian Belanger's "A History of the Emerson Radio Corporation." He covered the entire period from start to finish, showing many product pictures.

Bart Lee gives an interesting talk at the AWA meet almost every year, generally on short-wave topics. However, this time he reviewed last year's replication of Marconi's 1901 transatlantic radio propagation tests. He did this in great detail, describing the many similarities in propagation between the two tests and comparing equipment power, equipment sensitivity, sunspot activity, etc. He concluded that Marconi really did send a radio message across the Atlantic in 1901.

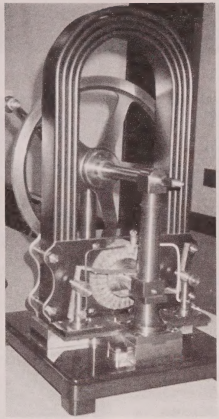
"Moonlight Restoration" was presented Thursday evening while other members took the bus to the AWA Museum, 25 miles away. I attended both events and took pictures of our new museum building. *Journal* Editor Marc Ellis hosted the restoration event along with Column Editor Ken Owens, Floyd Engels and Lane Upton. Each of the four briefly discussed a recent restoration project, and each talk was followed by informal audience discussion.

The "Pre-1912 Wireless and Electrical Apparatus" seminar was moderated by Felicia Kreuzer and Lauren Peckham. It was good to see Lauren back again this year. Ronald McClellan showed his beautifully restored circa 1880 demonstration electrical generator. He spent many hundreds of hours making and finishing the four horseshoe magnets and other missing parts. Lauren Peckham brought an extremely large late 1880's variometer. It was believed to be an experimental instrument from a science lab.

Many interesting artifacts were shown, but no radios. There was an excellent response from the large audience.

"Television, A Life History" reviewed TV from its birth in the late 19th century to the present. It was presented by Dr. Alex Magoun, Executive Director of the David Sarnoff laboratory museum. The "Authors and Editors Get-Together" seminar was hosted by *AWA Journal* Editor Marc Ellis, *Journal* column editors and *AWA Review* Editor, Bob Murray. Possible article topics and preparation procedures were discussed with current and prospective authors.

I wasn't able to attend the Key and Telegraph seminar, but thanks to a report from Moderator Tom Perera I can tell you that Dr. Franz Pichler discussed the beginnings of early telegraph in Austria and Dr. Russ Kleiman spoke on relay keys for powerful spark transmitters. Then Gil Schlehman demonstrated a very rare Brandyplex bug. Finally, Tom rounded out Gil's bug collection to an even 300 by presenting him with a tiny dual-lever "Hobart Autobug"



Ronald McClellan's circa 1880 demonstration electric generator, shown at the "Pre 1912" seminar, was brought back to life after countless hours of reconstruction and recreation.

The Auction

The antique radio auction included paper items, tubes, hardware, radios and other equipment. The first two hours were devoted to tubes and paper items; the last three hours were devoted to radio artifacts. Sales amounted to about $30,000. Rich Estes was the auctioneer again this year. Rich also conducts monthly antique radio auctions from his headquarters south of Cleveland, Ohio.

I thought the auction prices were generally reasonable. For a report covering most of the sales, see the auction results elsewhere in this issue. The top price in the auction was an unbelievable $1,900 for a Phil Weingarten replica Fleming valve! Next were $1,600 for a Collins KWM380, $1,500 for a "Ducretet spark coil," and $1500 for a very nice bronze bust of Marconi.

In the radio auction, I thought that $325 for a Federal 110, said to be complete and in good condition, was no more than half of its value. An AK model 10 breadboard with the tags and tubes brought $700. Perhaps a bit light I thought. A Kennedy #281 receiver in VGC with tubes brought an even $500. I wouldn't want to sell mine for that!

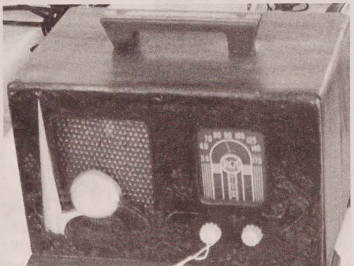
I thought that the 1920s wood cabinet cathedral and tombstone sets were selling for very low prices. A working Philco cathedral 60 only brought $75; another 60, said to be good condition but not stated to be working, sold for $45! A Crosley tombstone sold for $65.

Perhaps auction attendance was a bit lower this year, and too bad for you if you missed the event! There were some very good bargains available. The delays with receiving auction payments in previous years did not happen this year. My check was delivered on August 29, four days after the event ended.

The Museum

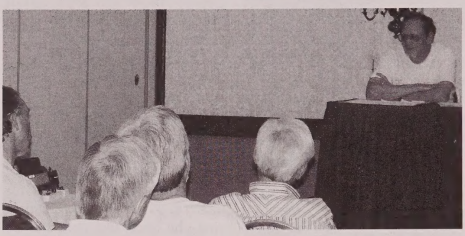
The A.W.A. Electronic Communication Museum was open for visitors from 7 to 9 p.m. Thursday and again 2 to 5 p.m. Sunday. The building that will be the museum's new home is now occupied by a group of antique dealers. It is right across the street from the present AWA annex, where many artifacts are stored, repaired and prepared for display. The new facility is much larger than our present museum display building. It also is handicap accessible.

(continued on page 33)



This 1939 RCA World's Fair radio, in excellent condition, was offered in the flea market at $1,495.

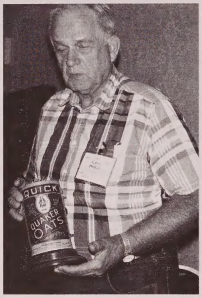
SEMINAR 2007 SNAPSHOTS



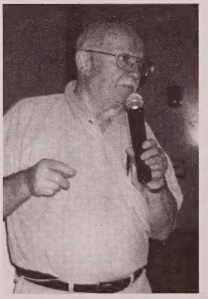
Photos by Richard Ransley and Larry Babcock.

Tim Walker conducting the "Review of Amateur Operations" get-together. (R.R.)

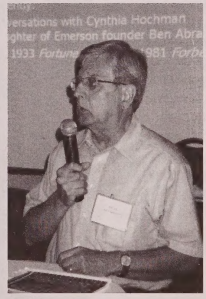
In "Television, a Life History," Alex Magoun, Executive Director of the David Sarnoff Library, surveyed the history of television from its birth in the 19th century to its death as a distinct technology in modern times. (R.R.)



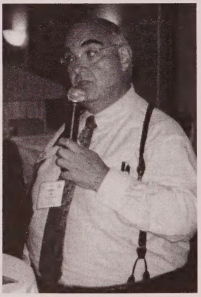
Floyd Engels, one of the presenters at the "Moonlight Restorations" seminar, shows off his painstakingly crafted replica of a 1920s Quaker Oats crystal set. (R.R.)



Peter Yanczer offered opportunities to experience early television viewing during his "Television 1928—What Was it Like?" (L.B.)



In his talk, AWA Vice President Brian Belanger discussed the history of the Emerson Radio Corporation. (L.B.)



Bart Lee presenting his "Short Wave Report," which reviewed last year's replication of Marconi's 1901 TransAtlantic tests. (L.B.)

Photos by Dick Ransley

The AWA Recognition Awards

These awards are traditionally presented during the annual banquet, given this year on the evening of Friday, August 24. Nominations for the first six awards listed below are solicited from the AWA membership at large and each winner is selected by a special committee charged with administering that particular honor.

The AWA Houck Award for Documentation goes to an AWA member who has written several original articles on radio development or history in the *AWA Journal*, *AWA Review*, or other publication. (This can include a book on a related subject.) *Winner: Dr. Eric Wenaas for his new book* The Golden Age of Radiola.

Alan Carter receives the Special Recognition Award from AWA President Geoff Bourne.

The AWA Houck Award for Preservation is for a member who, through personal accomplishment, has acquired, and preserved by documenting, an outstanding collection of radio artifacts. *Not presented this year.*

The Bruce Kelley-*OTB* Award is given to the member who publishes in *The AWA Journal* an article judged to be the most outstanding, original, historical presentation of the award year. For this year, articles in the July and October 2006 and the January and April 2007 issues were considered. *Winner:* Varun Aggarwal *for his article "The Real Inventor of Marconi's Wireless Detector," which appeared in the July 2006 issue.*

The J. Albert Moore Award comes to us through the Antique Radio Club of America, which was merged into AWA a few years ago. The award honors Mr. Moore's contributions to ARCA. As given by the AWA, it recognizes the *OTB* article, or series of articles, deemed to be the most outstanding of those dealing with radio hardware (radio sets, radio systems or components) printed during the award year. The issues considered are the same as those considered for the Bruce Kelley-*OTB* Award. *Winner: Al Smith for his clear and detailed article "Restoring an*

Harold Borchers looks quite pleased to receive the 2007 OT DX Contest award from Contest Coordinator Randy Haus.

Eric Wenaas accepts the AWA Houck Award from Houck Awards Administrator Barney Wooters.

Geoff presents Ray Chase with one of Ray's two contest awards.

Atwater Kent Model 84," which appeared in the October, 2006 issue.

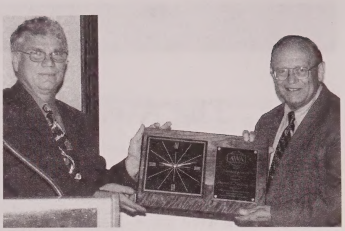
The Taylor Award, in memory of John Taylor, RCA TV Developer, is for preserving television history. *Winner: Dr. Alex Magoun for his dedication and pursuit of excellence as Executive Director of the David Sarnoff Library.*

The Tyne Tube Award is presented, in remembrance of Gerald F.J. Tyne, for contributions to preserving or documenting the history of tube technology. *Winner: Norm Wilson for his extensive research and display of early vacuum tubes.*

The President's Award is presented for outstanding service to AWA during this year. *Winner: Thomas Peterson, Jr. for his dedication and unwavering support of the Antique Wireless Association.*

The Linc Cundall Awards are presented to the winners of the Linc Cundall Memorial Old-Time CW Contest—*Stephen Hobensack, N8WE*—and the Linc Cundall DX Contest—*Harold Borchers, KB0ROB*.

The AWA Peckham Award for outstanding dedication to the Antique Wireless Association is presented this year to *Eleanor Williams, for her participation in,, and support of, many AWA events*.



Museum Curator Ed Gable accepts the President's Award for Tom Peterson.

This year, a Special Recognition Award was presented to Alan Carter for 20 unbroken years of attendance of the AWA Conference from his home in Croydon, England.

2007 Old Equipment Contest Winners

Compiled by Contest Coordinators Geoffrey Bourne and Chris Bacon

The theme for the 2007 Conference was "100 Years of Electronic Communications." Because of the scope of the theme, it was decided not to have separate contest theme categories this year, but to incorporate the theme into the Standard Categories.

Category 1. Passive Receivers
1st Bengt Svensson
World's Smallest Crystal Set

Category 2. Deforest Audion
1st Ed Taylor
Dual Plate Audion 1908
2nd Philip Taylor
BTH & Osram Audions

Category 3. Other Early Tube Sets
1st Geoffrey Bourne
Gecophone BC 2001
2nd Merrill Bancroft
Ethophone RX-1

Category 4. 1920s Superhet Receivers
2nd David Kaiser
Magnaformer 9-8

Category 5. 1920s Tuned RF Receivers
1st Merrill Bancroft
Atwater Kent 4052 & 4066 Breadboards

Category 6. 1920s Regenerative & Reflexed Receivers
1st Lauren Peckham
Mignon RC-2
2nd Merrill Bancroft
Peck Superfone Type A1
2nd Gary Alley
Fischer 1 Tube Regen
3rd Warren Wiedemann
Pilot Wasp

Category 7. Cathedrals, Tombstones and Consoles 1930s & 40s
1st Robert Lozier
Loewe EB-100 & Ericsson Radiola 312V
2nd John DeLoria
Gulbransen Chairside

Category 8. Radios in Disguise
1st Larry Babcock
RCA 1939 Worlds Fair Radio Display
2nd Bengt Svensson
Rastus Cat Crystal Radio
3rd Tom Perera
Rappi Toy Gun Radio

Category 9. Early Transistor Radios
1st Paul Farmer
Acopian Model 257-PE Solar-powered Radio
2nd Crawford MacKeand
Nivico Transistor Radio

Category 10-A Speakers (Horn)
1st Steve Wallace
Duotone Best Pal
2nd Peter De Angelo
Orotone Sea Shell

Category 10-B Speakers (Cone)
1st Buford Chidester
de Forest Audalion
2nd Larry Babcock
Balsawood Speaker
3rd Fred Crews
Bosch Ambotone

Category 11. Test Equipment
1st Lane Upton
Reliance Type 97 Hot Wire Ammeter

Category 12. Tubes
1st Robert Lozier
Tube Display
2nd Bob Millard
Catkin Tube Display
2nd Barney Wooters
8 Brightson True Blue UV-199 & Tigermann triode
3rd Ray Chase
VT-158 Zahl Radar Tube Display
Special: Fred Crews
Tungar Tube Display

Category 13-A Television (Mechanical)
1st Peter Yanczer
60 Line Mirror Screw 1932

Category 13-B Television (Electronic)
No Entries

Category 14. Advertising
1st Merrill Bancroft
"Selling Radios in the 1920s" display
2nd Lane Upton
Radio Advertising Paperweights

Category 15. Spark Transmitters and Artifacts
1st John Dilks
Melvin Andrew Spark Transmitter

Category 16-a. Vacuum Tube Transmitters & Receivers (Homebrew)
1st John Dilks
TPTG Transmitter
2nd Louis Vermond
1928 P-P TPTG Transmitter

Category 16-b. Vacuum Tube Transmitters & Receivers (commercial)
1st Bob McTeague
Collins & RCA Display

Category 17. Restoration of Appearance
1st Lane Upton
Crosley VI
2nd Fred Crews
American Cathedral

Category 18. Restoration of Operation
1st David Cheney
Northern Electric R-1

Category 19. New or Rebuilt
1st Lane Upton
Self Restoring Detectors
2nd Bill Holley
2 Homemade Crystal Radios

Category 20. Open Category
1st Bill Holley
1844- 2003 Sheet Music Display
2nd Bob Dobush
Cleveland Radio Display
2nd Tom Perera
Phil Weingarten Fabulous Fakes Display
3rd David & Julia Bart
Western Electric 1B Sound Head
Special: Richard Modafferi
McIntosh MR-78 portable

MAJOR CONTEST AWARDS

Eunice Thompson Best of Show Award
Dr. Ed Taylor
Dual Plate Audion 1908

Elle Craftsman Award
Lane Upton
Self Restoring Detectors

Matlack Transmitter Award
Louis Vermond
1928 P-P TPTG Transmitter

Ralph O. Williams Display Award
Ray Chase
VT-158 Zahl Radar Tube Display

People's Choice Award
Ray Chase
VT-158 Zahl Radar Tube Display

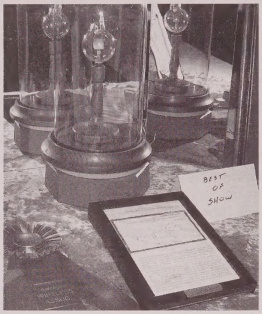
CONTEST COORDINATORS

Geoffrey Bourne *Chris Bacon*

CONTEST JUDGES

Chris Bacon *Ken Owens*
Ken Lowther *Geoffrey Bourne*

SELECTED BLUE RIBBON WINNERS



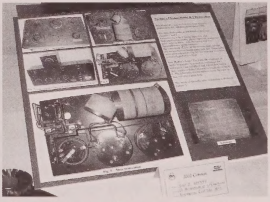
Ed Taylor walked away with the blue ribbon for "de Forest Audion" and also the "Best in Show" award with his 1908 dual plate version.

Merrill Bancroft came in first in "Advertising" with this "Selling Radios in the 1920s" display.

Built from a Radio News article, the TPTG transmitter submitted by John Dilks won the blue ribbon in "Vacuum Tube Transmitters and Receivers (Homebrew).

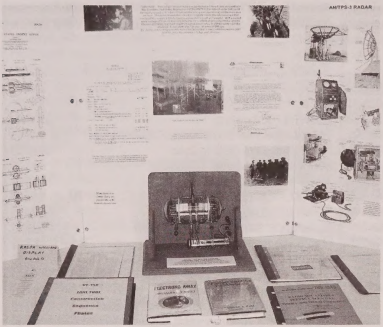
Bob McTeague won top honors in "Vacuum Tube Transmitters and Receivers (Commercial)" for his display of Collins and RCA gear.

Larry Babcock's RCA World's Fair Radio Display took first place in "Radios in Disguise."



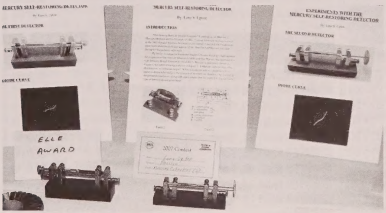
First place in "Restoration of Operation" went to David Cheney for his work on a Northern Electric R-1 receiver.

As always, this year's contest room contained more fascinating entries than we could possibly do justice to on these pages. However, here is a group of blue-ribbon winners that caught the photographer's eye as he toured the exhibits. *Photos by Richard Ransley*



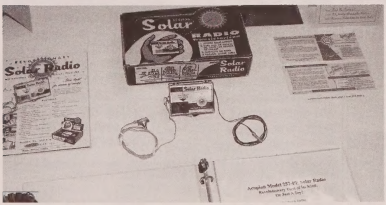
Though Ray Chase's VT-158 Zahl Radar Tube Display did not win the blue ribbon in "Tubes," it was honored with both the Ralph O. Williams Display Award and the People's Choice Award!

Top honors in "Tubes" went to Robert Lozier for his display of early triodes.



Lane Upton won both the blue ribbon in "New or Rebuilt" and the Elle Craftsman Award for his "Self-Restoring Detector" exhibit.

This rare Duotone "Best Pal" earned a first for Steve Wallace in "Speakers (Horn)."



Paul Farmer's unique "Acopian Model 257-PE Solar Powered Radio," in original box and with promotional material, was first place winner in "Early Transistor Radios."

The blue ribbon in "Restoration of Appearance" went to Lane Upton for returning a junk Crosley VI to factory mint condition.

AWA Conference Auction Report

Sale prices for selected items from the AWA 2007 Conference auction records. Every attempt has been made to ensure accuracy in reporting these results, but the AWA cannot assume responsibility for any errors that may occur.

ADVERTISING ITEMS	
WESTINGHOUSE RADIOTRON SIGN, Fair	$275.00
GE SIGN, Excellent	$30.00
C. MCCARTHY PUPPET, CIRCA 1938, Good	$65.00
VICTOR ADVERTISING PIECE	$45.00
TUNGSRAM TUBE EQUIVALENT CHARTS	$12.50

BOOKS AND MAGAZINES	
TOM KNEITEL, SURPLUS CONVERSION HANDBOOK, Excellent	$2.00
RCA 630TS/648PTK SERVICE DATA, Excellent	$10.00
SAROYAN, THE HUMAN COMEDY, Excellent	$40.00
RANDAL, THE NYMPH AND THE LAMP, Good	$5.00
MEMORIAL OF JOSEPH HENRY, 1880, Good	$130.00
CANADIAN SERVICE MANUAL, Good	$30.00
GLENN, THE COMPLETE PATENTS OF TESLA, Excellent	$35.00
PHILLIPS TUBE MANUAL, PRE 1958, Excellent	$30.00
RIDERS, VOLUMES 7, 9, 10, 12, Good	$15.00
LOWELL, MAGIC DIALS, Good	$35.00
ARC, 75 ISSUES, MOSTLY 1990s	$10.00
FINK, PRINCIPLES OF TV ENGINEERING, Excellent	$3.00
MEMORIAL OF SAMUEL MORSE	$110.00
AWA REVIEW, VOLUMES 1-8, Excellent	$95.00
2 BOXES IRE PROCEEDINGS	$85.00
BOX LOT 1920s QSTs	$55.00
3 BOXES QST, 1930s TO 1960s	$7.50
RYDER TELEVISION MANUAL, VOL. 3, Good	$2.00
RCA 1935 RED BOOK, Excellent	$15.00
RCA RED BOOKS, 1938-42, 1937, Good	$20.00
RIDER TUBE SUB GUIDE, Good	$5.00
RCA TUBE MANUALS (4 DIFFERENT), Good	$22.50
CHAPMAN, 3 RADIO BOYS BOOKS, Good	$4.00
MAGERS, 75 YRS OF WESTERN ELECTRIC TUBES, Excellent	$35.00
1905 AUTO TOPICS, Fair	$15.00

COMMUNICATIONS EQUIPMENT	
MOTOROLA SABER III HANDY TALKIE W/ MIC, Excellent	$15.00
COURIER 23 CH TUBE TYPE CB, Excellent	$50.00
HALLICRAFTERS SR-400/HA-20/EV-664, Excellent	$325.00
ROCKWELL KWM-380, Excellent	$1,600.00

CRYSTAL SETS	
GENERAL RADIO BC-14A, Good	$300.00
THOMPSON CRYSTAL SET, Good	$475.00
PAL CRYSTAL SET, Excellent	$185.00
DEFOREST DT-600, Good	$350.00
HEATHKIT CR-1 AND CHIP, Good	$80.00
HOWE CRYSTAL RADIO, Good	$35.00
TANDY "SCIENCE FAIR," Good	$6.00
MUSIC MASTER CRYSTAL SET, Good	$60.00

MISCELLANEOUS	
ELECTROVOICE MODEL 911 CRYSTAL MIC, Good	$40.00
DUCRETET SPARK COIL, Excellent	$1,550.00
MURDOCK .0017 NO. 483, Excellent	$15.00
MAGNAVOX SHIPPING BOX, Good	$40.00
GRANCO MODEL T-100 FM TUNER, Excellent	$5.00
CHICAGO LAB GALVANOMETER 1920s, Excellent	$280.00
PARAGON TYPE 3 CABINET, Excellent	$90.00
STROMBERG PA AMP, Excellent	$30.00
W.E. PHONE TRANSFER PANEL, Good	$10.00
WESTERN 7-A, Excellent	$500.00
THORDARSON 1 kW SPARK TRANSFORMER, Good	$25.00
FRAMED MARCONI RIBBON, Good	$500.00
BOGEN MX-60, Unknown	$40.00
AMPEX 0118, Fair	$45.00
H. H. SCOTT LK-72, Fair	$45.00
SANSUI MODEL AU-70, Fair	$35.00
TEFRA VIOLET RAY OUTFIT, Fair	$35.00
BLILEY HAM BAND QUARTZ CRYSTALS, Excellent	$5.00
ITALIAN RADIO CALENDAR, Excellent	$17.50
WESTERN 7A AMPLIFIER, Good	$150.00
UTC LS-64 COMPONENT, Excellent	$60.00
HAMMARLUND CRYSTAL CALIBRATORS, Excellent	$10.00
RADIO SHACK R TO R TAPE DECK, Unknown	$5.00
BRANDES, HEADPHONES, Good	$20.00
HEATHKIT 11 CATALOGS, 1964-1992, Excellent	$10.00
STROMBERG TUBE PHONO, Fair	$5.00
PITTSCO CATALOG	$145.00
1919 WIRELESS CATALOG 1919, Fair	$275.00
BUST OF MARCONI, Good	$1,500.00
H. H. SCOTT MODEL 99, Good	$85.00
SEEBURG JUKEBOX AMPLIFIER, Good	$30.00

RECEIVERS	
AMRAD NEUTRODYNE, Good	$200.00
A. REID POCKETPHONE, BRITISH, Fair	$65.00
ATWATER KENT 10 BREADBOARD, Good	$700.00
ATWATER KENT 20, Fair	$45.00
ATWATER KENT 20, Unknown	$15.00
ATWATER KENT 21, Good	$200.00
ATWATER KENT 35, Poor	$20.00
ATWATER KENT 40, Fair	$15.00
ATWATER KENT 44, Good	$5.00
ATWATER KENT 76 CONSOLE, Good	$65.00
BC 348, Good	$45.00
BENDIX III, Excellent	$30.00
BUSH DAC90A, Excellent	$200.00
CASE 60A 6 TUBE BATTERY, Excellent	$50.00
CASE 801, Excellent	$850.00
COLONIAL 32AC, Excellent	$10.00
COLONIAL GLOBE, Good	$350.00
CROSLEY 10-135, Excellent	$75.00
CROSLEY 52, Good	75.00
CROSLEY 601, Good	$35.00
CROSLEY 646 FARM SET, Excellent	$65.00
DUMONT RA-346, Excellent	$35.00
E. H. SCOTT ALLWAVE 12 TUNER CHASSIS, Fair	$25.00
EKCO AD-36, Excellent	$450.00
EMERSON DP-332, Good	$25.00
EMERSON INGRAHAM AX, Good	$45.00
EMERSON Z-159, Excellent	$125.00
EMPRESS CHALET, Fair	$125.00
FEDERAL TYPE 110, Good	$325.00
FRANKLIN CATHEDRAL 4 TUBE, Good	$125.00
GREBE SYNCHROPHASE 7, Good	$85.00
GRUNDIG 2028,Good	$45.00

HALLICRAFTERS S-200 LEGIONNAIRE, Excellent	$45.00
HAMMARLUND HQ-120, Excellent	$125.00
KENNEDY 220, Good	$450.00
KENNEDY TYPE 281, Excellent	$500.00
KLEINEMPFANGER, Excellent	$250.00
LORENZ KLEINEMPFANGER, Excellent	$300.00
NATIONAL HRO 5-T, Excellent	$175.00
NORTHERN R40L, Fair	$55.00
OZARKA S-1 SENIOR WITH HORN SPEAKER, Good	$125.00
PHILCO 15-TUBE DECO W/ 4 SPKRS, Good	$25.00
PHILCO 37-61, Excellent	$70.00
PHILCO 37-623, Excellent	$75.00
PHILCO 42-PT94, Excellent	$15.00
PHILCO 48-1228, Fair	$40.00
PHILCO 60 CATHEDRAL, Fair	$45.00
PHILCO 60, Good	$75.00
PHILCO 90, Excellent	$250.00
PHILCO 511, Good	$22.50
PHILLIPS 1957 BC RCVR, Good	$80.00
RCA 46X11, Fair	$10.00
RCA 224 6 LEG CONSOLE, Fair	$30.00
RCA RADIOLA III, Good	$55.00
RCA RADIOLA IIIA, Good	$75.00
RCA RADIOLA 20 IN PACKING CRATE, Good	$125.00
ROYCE 1-673, Excellent	$30.00
SILVERTONE 6424, Excellent	$35.00
STROMBERG 601A, 1926, Good	$70.00
TRUETONE D-724, Excellent	$75.00
TUSKA 224, Good	$365.00
WESTERN 2-A TUNING UNIT, Excellent	$800.00
WESTINGHOUSE MODEL 769 P7A, Good	$55.00
ZENITH 2 TRANS-OCEANICS (3000 & 1000), Good	$130.00
ZENITH TRANS-OCEANIC 3000, Fair	$55.00
ZENITH 68527, Excellent	$65.00

SPEAKERS

RCA 100A, Good	$25.00
STERLING DINKIE, Excellent	$65.00
STERLING BABY HORN, Excellent	$40.00
"MUTUAL," Excellent	$100.00
EMPIRE END, Good	$55.00
STROMBERG 1A, Good	$95.00
RCA MODEL 100A, Good	$45.00
TOWER CONE SPEAKER IN CRATE, Excellent	$75.00
SNYDER, Good	$55.00
MURDOCK NO. 500, Excellent	$100.00

TELEGRAPH

UNKNOWN BRITISH SPARK KEY, Excellent	$325.00
SEMIAUTOMATIC KEY "BUG," Excellent	$95.00
HOMEBREW BUG KEY, Excellent	$45.00
PARTICK AND KOB 1875, Excellent	$375.00
J-37, Good	$5.00
BUNNELL COMPONENTS, Excellent	$125.00
MCELROY PAPER TAPE RECORDER RD60 U, Excellent	$35.00
UNKNOWN KEY & SOUNDER RADIO (NOVELTY), Excellent	$35.00
RUSSIAN MINATURE KEY, Excellent	$20.00
MCELROY STANDARD MAC, Good	$120.00
OELLER/STOCK, Good	$300.00
BRITISH GPO KEY WE-8203, Good	$150.00

TELEVISION

PHILCO PREDICTA BARBER POLE, Unknown	$450.00
MOTOROLA VT71, Unknown	$105.00
PHILCO SAFARI (BLACK), Good	$150.00

TEST EQUIPMENT

MCMURDO 906 SIGNAL GENERATOR, Excellent	$12.00
EMC MODEL 213 TUBE TESTER, Good	$15.00
FERRIS 18FS #151, Good	$5.00
HICKOK CARDMATIC TUBE TESTER, Good	$45.00
RCA UQ-4269 (WESTON 671), Good	$135.00
AMERICAN PHOTOCELL LAB DEMONSTRATOR, Excellent	$175.00
GENERAL RADIO AUDIO OSCILLATOR TYPE 813	$10.00
GENERAL RADIO 1106-B, Excellent	$20.00
GENERAL RADIO 617C, Excellent	$12.50

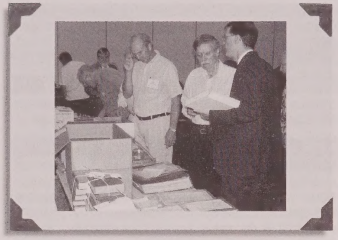
TRANSMITTERS

JOHNSON VIKING RANGER, Excellent	$450.00
GATES M6095, Good	$105.00

TUBES

AMPEREX EL36	$40.00
ATWATER KENT 607 RECTIFIER, Unknown	$10.00
BRITISH POST OFFICE TUBES, UNKNOWN	$100.00
CALIFORNIA 892R TRANSMIT TUBE, Unknown	$45.00
CONDOR PR 54, Unknown	$45.00
GOLD SEAL METAL #24 AND #27 TUBES, Good	$85.00
ERGON 245 TUBES (2), Good	$90.00
FARAD UNBASED EARLY AC TUBE, Unknown	$70.00
GE 45 TUBES (2), Good	$35.00
GENALEX KT-66, Good	$35.00
GENALEX KT-88, Good	$425.00
IMAGE ORTHICONS MIXED, Unknown	$175.00
MESCO 2721	$150.00
MOORHEAD, Unknown	$75.00
MOORHEAD VT N	$70.00
NORTHERN R212-D, Unknown	$130.00
PACENT SOUND PICKUP TUBE #10	$20.00
RADIOAUDION MYERS TUBE WITH BASE	$115.00
RCA RADIOTRON TYPE 45, Excellent	$35.00
RCA IMAGE ORTHICON, Unknown	$20.00
SYLVANIA 6550 MATCHED PAIR, Unknown	$150.00
TABLE LAMP MADE FROM TX TUBE, Good	$110.00
UNKNOWN 01A, Good	$50.00
UNKNOWN 01A, Good	$30.00
UNKNOWN 171A, Good	$35.00
UNKNOWN 201A, Good	$140.00
UNKNOWN 203D, Unknown	$75.00
UNKNOWN 803, Unknown	$10.00
UNKNOWN CV1249 SILICA VALVE, Unknown	$235.00
UNKNOWN GLOBE BALLAST, Unknown	$2.00
UNKNOWN MAGNETRON, Unknown	$5.00
UNKNOWN SPEED 295 TUBE, NOS	$205.00
UNKNOWN UX-199, Good	$160.00
UNKNOWN UV-199, Good	$85.00
UNKNOWN UV-876 AND SOCKET	$40.00
VARIAN KLYSTRON VA 222E, Unknown	$5.00
VARIAN KLYSTRON VA 1259E, Unknown	$7.50
WEINGARTEN REPLICA FLEMING VALVE, Unknown	$1,900.00
WELSCH PEANUT (EARLY), Good	$275.00
WESTERN 2A, Good	$5.00
WESTERN 101-F, Unknown	$75.00
WESTERN 717A, Good	$1.00
WESTERN 275A, Unknown	$85.00
WESTERN KYLSTRON 445A, Unknown	$2.00
WESTERN R212-E, Unknown	$60.00
WESTERN VT-5, Good	$30.00
WESTERN VT-5, Good	$30.00
WESTERN VT-5, Good	$30.00
WESTERN VT-5, Good	$50.00
WESTERN VT-5, Good	$50.00
WESTERN VT-1, Unknown	$50.00
WESTERN VT-1, Good	$100.00

Annual Conference Candids



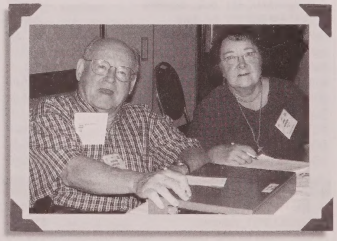
Prospective buyers examine paper items at auction preview.

Flea market offers lots of opportunity for good conversation.

Board member Lauren Peckham chats with Fran Holley at the Book Fair.

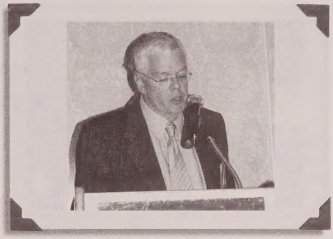
Past President Bruce Roloson (left) and financial chairperson Barney Wooters share a serious moment.

Auctioneer Richard Estes presides over a spirited bidding contest. At his right, Museum Curator Ed Gable takes notes.



Barney Wooters, with wife Jane, take a brief rest from their job of managing the conference cashboxes.

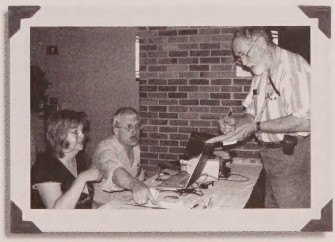
At the banquet, Tom Perera (left) surprises Curator Ed Gable with the donation of a rare early telegraphic item for our museum.



Keynote speaker Mike Adams regales banqueters with his entertaining presentation dispelling some of the myths about Lee de Forest.

Looks like Bruce Roloson is opening his wallet to purchase a flea market item as Lauren Peckham (right) looks on.

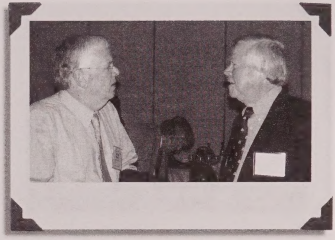
Vice president Ron Frisbie (center) with board member Felicia Kreuzer and husband Jim.



Chris and Bev Fandt check in a member at the registration desk.

Tom Perera (right) with Swedish members Gertrud and Anders Widell.

Serious shoppers at a flea market table.

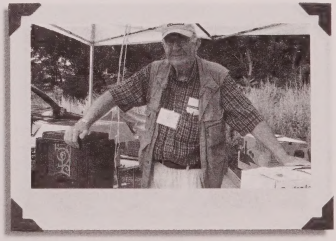


Banquet keynote speaker Mike Adams (left) with Antique Radio Classified publisher John Terrey.

Peter and Edna Yanczer with Brazilian member Maria De Oliveira (right).

Derk Rouwhorst, from Holland (left), and UK member Alan Carter are part of our international contingent.

Edna Yanczer (left) and "Hutch" Frederick staff the AWA table at the book fair.



Robert Karow is ready to welcome customers at his flea market booth.

THE COMMUNICATIONS RECEIVER

EDITED BY **WILLIAM FIZETTE, W2DGB**, RR 1, BOX 1634, HENRYVILLE, PA 18332
E-MAIL: w2dgb@arrl.net. *PLEASE INCLUDE SASE FOR REPLY.*

The RCA Radiomarine Corporation Model AR 8506B Liberty Ship and Victory Ship Receiver

By Gene Garrison

We are indebted to author Garrison for bringing this significant World War II era receiver to our attention. This receiver was part of the RMCA 4U radio console, the pride of the Radiomarine Corporation division of RCA. It is an interesting story about a radio that played a very important role in a critical time, when it was touch-and-go as to whether the Allies would prevail. W.F.

The RCA Radiomarine Corporation developed a 4U (4 units) radio system about 1940. The system included four independent receivers and three transmitters, all mounted in a single console. See the feature article "Liberty Ships and Victory Ships" elsewhere in this issue. One of the receivers included was the AR-8506-B.

According to its instruction manual (1), "The model AR-8506-B is a five band intermediate and high frequency radio receiver designed for service aboard ships or in land stations. This receiver was approved on February 6th, 1943, by the Federal Communications Commission for compliance with Subsection 8.130(b) as capable of being used and operated on board ships of the United States within the limitations regarding the radiation of energy imposed by Subsection 8.130(b)."

During World War II, the German Navy was highly successful in locating and attacking Allied convoys. It was claimed that their direction finding equipment was sensitive enough to detect radiations from regenerative receivers on board ships up to 100 miles distant. Locating a reference to the FCC Regulations of the era may detail the requirements of Subsection 8.130(b).

Design characteristics of the AR-8506-B

• A ten tube superheterodyne circuit, with a triple stage 1700 kHz intermediate frequency, covering the following bands: 85-220 kHz, 210-550 kHz, 1.9-5.4 MHz, 5.2-12 MHz, 11.5-25 MHz.

• Tube complement as follows: 6SG7 RF Amplifier, 6SG7 Mixer, 6J5 HF Oscillator, 6SG7 (3) 1st, 2nd and 3rd IF Amplifiers, 6SQ7 Detector, AVC, and 1st Audio Amplifier, 25L6/GT Audio Output, 25Z6 Rectifier, 6J5 BFO. A G-10 one-watt neon regulator bulb is used to provide a regulated voltage source for the oscillator. (The glow from this bulb also provides a front panel "power on" indicator.)

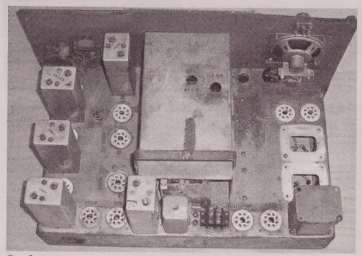
• Built to comply with F.C.C. Subsection 8.130(b), which limited radiation to 400 microwatts—thus reducing the vulnerability of the local oscillator signals of shipboard receivers to enemy radio direction finding.

• In order to provide a high degree of shielding, the AR-8506-B cabinet has no ventilation louvers. The steel front panel is copper-plated on both sides and the steel cabinet is copper-plated on the inside. The RF oscillator and band switching sections, beneath the chassis, are shielded by steel covers. Other than the two headphone jacks, there are only two openings in the cabinet; one for the twist-lock power connector, and the other for the antenna lead.

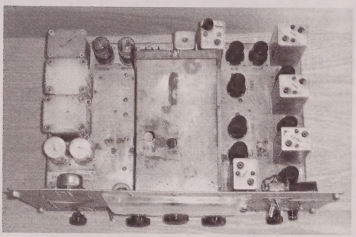
Front panel of the AR-8506-B prior to restoration.

• An accessory, the RM-8 Line Filter Unit, reduced radiation into the power source.

• This receiver input operates on 115 volts AC or DC, but was designed primarily for use DC shipboard power mains. It has no power transformer. the tube filaments being connected in series across the input voltage. When operated on AC, high voltage (B+) is obtained via a 25Z6 rectifier. Operation on 230 volts AC or DC was possible using an accessory RM-9 Resistor Unit



In this pre-restoration shot of the chassis a few components have already been removed for special treatment.



The AR-8506-B chassis after restoration.

(300 ohms, 75 watts).

• The antenna connection, located on a terminal strip on the rear of the chassis, accommodates a balanced doublet antenna. The band switch connects the doublet antenna as a "T" antenna to ground on Band 1 (85 - 220 kHz) and Band 2 (210 - 550 kHz), and as a doublet antenna on Bands 3 through 5.

• The weight of the receiver, in its cabinet, is 63 pounds.

The construction of this receiver is similar to that of the commercial and amateur receivers of the late 1930s and early 1940s. The manufacture of these sets for the merchant marine fleet may not have had the same priority on the use of resources as did the military sets of the World War II period.

But this was absolutely a quality product. These radios were built for the greatest maritime/wartime need our nation has ever experienced. Cost was probably not an issue, but production time was critical, with intense pressure on parts suppliers, who in turn were laboring under material shortages. This may be one reason that the front panel is not overly attractive, with some operating conveniences lacking. The radio is rugged, well built, and—as mentioned—is well shielded and not exactly a lightweight.

Another indication of quality manufacture is the long-term calibration stability. The "as-found" calibration of this set was precise, requiring no tweaking.

Its design is not as compact or as rugged as the tactical military sets (i.e., BC 342, BC 348, etc.) of that time. However, it is perhaps unfair to compare the construction of this marine radio to that of a tactical receiver such as the BC-348 or the BC-342. The radio room of a ship, unless under attack, is a far more forgiving environment.

There is no front panel BFO pitch control, dial lighting, antenna trimmer, calibrator, crystal filter, dial lock, standby switch, or signal strength meter. There is no engraving on the front panel. Controls are identified by labels made from an early form of plastic. The labels are attached with small screws. Economy in design and speed in manufacturing may have been production goals.

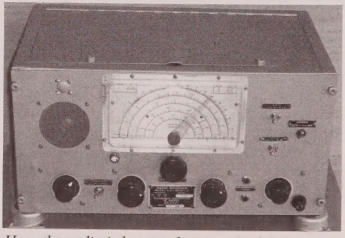
Though there is no BFO control on the front panel, there is a trimmer knob on the top of the BFO coil can. *(One can speculate on the reasons for this, but the concept is found in numerous receivers of the late 1930s. W.F.).*

Restoring an AR-8506-B

The receiver to be restored was AR-8506-B, Serial Number 2636, with a date of manufacture of October, 1944. The two plug-in power supply electrolytic capacitors were leaky, and the audio output transformer primary winding was open. The front panel was bent, and the paint was cracked. The major restoration efforts included a thorough cleaning of the chassis, rebuilding the electrolytics, and rebuilding the audio output transformer.

Cleaning of the chassis was done by covering

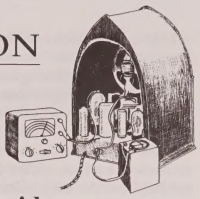
(continued on page 32)



Here the radio is buttoned up in its cabinet, shock-mounted on a baseboard and ready for display.

EQUIPMENT RESTORATION

EDITED BY **KEN OWENS**, 478 SYCAMORE DR., CIRCLEVILLE, OH 43113
radiowd11@yahoo.com
PLEASE SEND CORRESPONDENCE DIRECTLY TO THE ABOVE ADDRESS, INCLUDING SASE FOR REPLY.



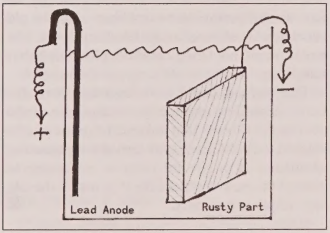
Rust Removal – Minimizing Soldering Residue – Replacing a 262 kHz I.F. Transformer

Electrolytic Rust Removal

This method of removing rust from radio chassis and other parts did not originate with me. I read it on the antiqueradios.com forum and tried it out on an Atwater Kent chassis which had heavy rusting on one corner from a mouse nest.

Get a plastic bucket big enough to immerse the part in. A 5 gallon bucket from the hardware store or a rectangular plastic trash can is ideal. It must be plastic—not metal.

The electrolyte is composed of sodium carbonate (washing soda) at the rate of ½ cup per gallon of water. Do not use baking soda (bicarbonate). I get my washing soda at the grocery store in the laundry products section.



Electrolytic rust removal bath uses sodim carbonate solution (see text).

The anode can be iron, but it will corrode heavily in the process. I used a piece of sheet lead for my anode because it is inert. You will need a fairly heavy current, on the order of 10A for a chassis, to remove the rust in a reasonable time.

Bend the lead anode over the edge of the bucket to hold it in place and suspend the part by a copper wire close to the anode. Use wood board laid over the top edge of the bucket between the anode and part to keep them from falling into contact. The arrangement is shown in the sketch.

Pour in enough electrolyte to cover the part and apply the current. There will be a vigorous evolution of gas. Oxygen is liberated at the anode and hydrogen at the rusty part. It is this atomic hydrogen that does the work according to the equation below:

$$6H + Fe_2O_3 \rightarrow 2Fe + 3H_2O$$

This reaction is self-limiting. When the rust is gone, gas continues to evolve, but there is no further action on the metal. You can walk away and come back later to check on progress. The derusted part will have a black coating of iron particles which can be washed away with a brush. The surface will be pitted where the rust was, but there is nothing that can be done about it. The metal is gone and can't be replaced.

After the chassis is clean and dry, I paint the pitted areas with aluminum paint which has a bit of black paint mixed in to give it a slight gray color. While the paint is still wet, I wipe it off the leave paint only in the pits. This prevents future rusting and blends the area in.

The chassis I treated was nickel plated. The process had no effect on the plating. I haven't tried it on painted parts, so I don't know if it will strip off the paint.

Washing soda has been used for a couple of centuries by housewives, so it is safe and does not harm the environment. Used electrolyte can be poured down the drain. *Don't get it in your eyes, and don't inhale the mist which the gas bubbles throw off. It is highly irritating. Do the process in an open area so the hydrogen can escape and not build up an explosive concentration. I work in the garage.*

• • • • • •

Here is more in the series of very useful tips from Lane Upton (Salt Lake City):

Over the years I have seen considerable restoration work where the residue from soldering was very obvious. I have been able to minimize the residue by the following procedures and cautions:

1. Use solder with low rosin content, such as Kester #24-6337-8817.

2. Be sure the soldering iron is well up to temperature before using so that most of the flux is vaporized. Mine is adjustable, and I use it between 750 and 800°F for this type of connection.

3. Pre-tin all materials before making the final solder connection. After tinning, clean all residue from the item before making the final connection.

4. Many of the old insulated wires have a residue from the rubber undercoating which makes them very difficult to tin. I have found by careful use of a small amount of non-corrosive soldering paste they can be easily tinned. Be careful that the fabric outer insulation doesn't wick up the soldering paste because it will discolor the fabric.

5. When the final solder joint is completed, clean with a suitable solvent being sure to cover surrounding areas to prevent splatters. Post-It note sheets are ideal for covering panels etc.

• • • • • •

Here is a great restoration fix from John Kaetz, Jr. (Bessemer, AL):

During restoration of a Gloritone 99A, a condition sounding like "silver migration disease" became apparent. It only occurred occasionally so it took a good deal of time to pin it down to the output IF transformer. It didn't respond to the limited things that could be done to repair it. The IF transformer was a 262 kHz unit, close-coupled and single-tuned, appearing to be alternate-layer wound. The can was 2 inches tall by two inches square—not exactly an off-the-shelf item.

Remembering that auto radios frequently use 262.5 kHz IFs and having a few junkers around, I found an old 12 volt B+ tube type containing a couple of ¼" units mounted on the PC board. One was removed, checked and looked good. The height was exactly the same as the old IF can but otherwise posed a challenge to mount in an acceptable manner.

I found a piece of ½" wide by 0.05" thick steel strip, cut a piece 2⅜" long, and drilled a hole at each end to match the mounting holes in the chassis for the old IF can. I then drilled a hole in the center large enough to pass an alignment tool through for the hex-hole tuning slugs and two small ones on each side of the center hole ¾" apart for the mounting ears.

I filed the edges a bit to get more clearance for the terminals, then stuck the ears through their holes and soldered them in place, thus securing the can to the strip. The terminals straddled the steel strip, hanging off each side. The assembly was placed over the holes in the chassis from underneath to get a bit of headroom in the old can, and then the old can was bolted over the whole thing. From the top it looked just like it did from the factory. I didn't even have to drill a hole in the top of the old can for alignment, being able to pass the tool all the way through the bottom slug from underneath the chassis to tune the top slug.

I then wired it up, being careful to use the proper connections previously sketched, did a touch-up alignment and it worked perfectly. In fact, overall performance was better than the old one when the old one wasn't breaking down. The replacement, not being close-coupled, has better selectivity.

This method would work for a variety of different situations and the mounting base could utilize perfboard that might be more easily worked to fit different transformers or mounting situations. It might not even be necessary to ground the new can because it is inside the old one, which is grounded.

COMMUNICATIONS RECEIVER, *continued from page 30*

all the air transformers and IF cans with plastic sandwich bags and masking tape, then washing with "Simple Green" and a scrub brush. No attempt was made to restore the steel chassis' finish to an "as new" condition, as that step would have required removal of all components.

The electrolytic cans were cut open using a jeweler's saw and the internal capacitors replaced with new components. Being aluminum, the cans could not be soldered back onto their bases. Instead, they were re-fastened with epoxy cement.

The case of the faulty Kenyon audio transformer was opened so that the defective transformer core could be removed. It was replaced in the case with an equivalent miniature Stancor unit. Also, one of the "bathtub" paper capacitors was replaced with a new (old stock) component.

After the technical issues were successfully resolved, the front panel paint was stripped, and the panel and the cabinet were repainted. I matched the original color, which I term "Radiomarine Blue." In some RMCA gear a gray color was used. *(I have seen other RMCA receivers with the blue color used by the author. W.F.)*

Regarding the cabinet, there apparently were both rack mount and stand-alone installations. One source describes the 4U console being prefabricated and marketed as a complete package, ready for installation on the ship. This prefabrication was a major factor in the rapid construction of the Liberty and Victory ships.

The receiver was mounted with new (old stock) Barry shock mounts on a display base. A Hubbell twist lock power cord connector was fitted. A severe crack in the plastic dial cover was cemented and polished as well as possible and a non-original coax connector hole in the front panel was filled with a plastic plug.

Operation

Using an amateur trap dipole antenna, this receiver's reception of shortwave broadcasters and amateurs on the HF bands is typical of "classic" bandswitching tube-type receivers. On LF, a Non-Directional Beacon (NDB), transmitting with a power of 25 Watts on 351 kHz, approximately 20 miles distant can easily be heard. There was no need to recalibrate the receiver. The WWV signals at 5.0 MHz, 10 MHz and 15 MHz are "on the mark" on Bands 3, 4, and 5.

Potential owners of this type of receiver are cautioned that it is an "AC/DC" set, with one side of the power line common to the circuit. Care must be used in observing polarity when applying power, and in grounding the set. The use of an isolation transformer is highly recommended.

Reference

(1) Instruction Book, Model AR-8506-B Intermediate and High Frequency Receiver, Radiomarine Corporation of America, A Service of Radio Corporation of America, 73 Varick Street, New York, 13, N. Y. June, 1949.

ONE MAN'S IMPRESSIONS, *continued from page 17*

The museum library is currently being transferred to "Building 2," an auxiliary structure behind "the main building." However, it will take a few years to transfer *all* of the items from the present museum and annex buildings. In the meantime the main building will continue to provide space to antique dealers.

A major advantage of the new location, I think, is that it is right on Routes 5 and 20 so we will be able to place a prominent sign right on our property. I anticipate that this will have a definite impact on both museum attendance and club membership.

Equipment Contest

Contest entries were solicited in 20 categories, and the resulting display of artifacts was spectacular, as always. To cite a few examples: John Dilks' very nice spark transmitter and nicely constructed home brew vacuum tube transmitters both won blue ribbons. Nice going, John!

The "Best of Show" ribbon was won by Ed Taylor with his de Forest spherical Audion display on a turntable. Congratulations, Ed! Steve Wallace won a blue ribbon in the horn speaker category for his very unusual "Best Pal" horn with two wooden bowl reflectors. I have never seen another like it.

Your Conference Reporter won a blue ribbon in the "radios in disguise" category with his 1939 World's Fair RCA portable. This is not the radio usually associated with the fair. However, with the large Trylon and Persiphere on top it is surely of the period. In fact, it was introduced at the fair's RCA television exhibit. I actually attended this fair and was televised at the RCA exhibit.

Banquet and Luncheon

The annual awards banquet was preceded by a social hour. The banquet was held Friday evening and Mike Adams, the keynote speaker, presented a lively talk on Lee deForest. His aim was to dispel some of the myths that have grown up around this controversial inventor. The various AWA awards were presented and the winners in the Old Equipment Contest were announced. Following the dinner, the contest area was opened for viewing.

The always popular ladies' luncheon was held on Saturday, providing spouses with a function of their own to enjoy while husbands attended the auction.

The AWA Review

AWA Review Volume 20 was introduced at the conference Book Fair for a price of $15.00. It contains ten very diversified articles on 230 pages. All are related to the conference theme "One Hundred Years of Electronic Communications." Included is your reporter's article, "First World War Aircraft Radio." He was invited to write this article after his exhibit on this topic won "Best of Show" at the 2006 conference. The *Review* is published annually. It generally con-

tains longer articles, while the shorter ones appear in the quarterly *AWA Journal*.

In Closing

I come to this event every year, arriving early and leaving only after the very last event is over. Even though I have acquired some nice additions to my collection over the years, I really come for the socializing. I probably have more friends here than I do at home and it is very nice to renew those friendships every year. I hope to see you all at the conference next year!

In closing, I'd like to give special thanks to John Dilks, who edits the "Old Radio" column for the ARRL publication *QST*. In the July and August issues he devoted a total of four pages to the history of AWA and a description of both the 2006 conference and the conference plans for 2007. *QST* has a circulation of about 120,000, so the articles should certainly draw many new members into our club. Thanks for your support, John!

BY LATEN FETTERS

A BLUE SKY SOLUTION TO AN EXPERIMENTAL PROBLEM

The early days of superconductivity research presented many unusual problems. Burnouts of the test coil were far too frequent. The special alloy wire was costly and difficult to manufacture, and therefore scarce. The cause of the burnouts was very evident, but the solution seemed almost impossible to attain.

In order to maintain superconductivity at that time, the coil temperature had to stay within 5 degrees of absolute zero. The temperature was measured on the Kelvin scale in degrees Celsius. (Note: -273.15 C is absolute zero.) However at those temperatures, any small glitch or hitch in the system could cause the temperature to rise a few degrees.

In our lab, the required temperature was maintained within a large double-walled Dewar flask containing liquid helium, surrounded by a second double-walled Dewar containing liquid nitrogen. The coil, which had multiple windings, was about the size of two doughnuts side by side. It was mounted on a long probe that carried the leads to the test instruments.

A 12-volt auto battery supplied the power. The coil was in series with an ammeter, and a voltmeter was connected across the coil. A specially designed "make-before-break" switch was used to close the circuit before cutting out the source of power.

When the switch was activated with the temperature in the proper range, the voltmeter would drop to zero, yet current would continue to flow through the circuit at 10 amps, creating a magnetic field of 100,000 gauss. (Note: before superconductivity, to develop just 25,000 gauss, we used two water-cooled 25-ton Littleton magnets on embedded rails, one north and one south, powered by a 600-amp motor-driven generator in the basement of the building.)

However, when the temperature rose out of the operating range, the coil would "flash" from zero resistance to normal resistance and would be burned out by the high current. One group at the lab was working on a super-fast circuit breaker to open the circuit before burnout; a second group was working on a super-fast fuse. But the problem was also given to a "Blue Sky Boy" with ideas "way out there." A Blue Sky Boy does not think like you or me!

He wound a new coil, removing the insulation from the tops of the turns in each layer. A layer of brass shim stock was added over each layer before the succeeding one was wound. This effectively shorted out all turns of all layers of the coil. Crazy, you say? Yes, crazy like a fox!

At superconducting temperatures, the brass shim stock represented a relatively high resistance compared to zero resistance of the wire. So the current took the path of least resistance and flowed through the coil turns. But if the temperature rose, and the coil turns returned to normal resistance, the shim stock would take the load and the coil was saved from disaster.

1537 THELMA AVE., LIBRARY, PA 15129-9629

PROXY

ANTIQUE WIRELESS ASSOCIATION, INC.
AND
A.W.A. ELECTRONIC COMMUNICATION MUSEUM

This proxy is solicited on behalf of the board of directors of the Antique Wireless Association, Inc., and the Trustees of A.W.A. Electronic Communication Museum.

Geoffrey Bourne, Ronald E. Frisbie and Edward Gable or any one or more of them with power of substitution in each, are hereby authorized to represent the undersigned at the 2007 annual membership meetings of the Antique Wireless Association, Inc. and A.W.A. Electronic Communication Museum to be held consecutively on November 11, 2007, starting at 11:00 AM at the following location:

A.W.A. Museum Building #2
6925 Route 5 & 20
Bloomfield, NY 14469

Antique Wireless Association, Inc.

1. To set the number of directors of the Antique Wireless Association, Inc. at 17.
   For ( ) Against ( ) Abstain ( )

2. To elect the following nominees to be directors of the Antique Wireless Association, Inc. with terms that expire as indicated:

   Randy Haus 10 Felicia Kreuzer 10
   Lauren Peckham 10 * David Bart 10
   Tom Peterson 10 * John V. Terrey 10

   *New director biography in "AWA News," October, 2007 *AWA Journal*

   For ( ) Against ( ) Abstain ( )

REMOVE FROM BOOK, THEN SEPARATE AT PERFORATION

A.W.A. Electronic Communication Museum

1. To set the number of trustees of A.W.A. Electronic Communication Museum at 12.
   For ( ) Against ( ) Abstain ( )

2. To elect the following nominees to be trustees of the A.W.A. Electronic Communication Museum class whose terms expire in 2010:

   Stan Avery Ron Walker
   Lauren Peckham Tom Peterson

   For ( ) Against ( ) Abstain ( )

IMPORTANT – TO BE PROMPTLY SIGNED AND DATED BELOW

This PROXY, when properly executed, will be voted in the manner directed herein by the undersigned member. If no direction is made, this proxy will be voted for setting the indicated number of directors and trustees (items 1), for nominees listed for director and for election of museum trustees (items 2), and, in their discretion, upon such other business as may properly come before the annual meeting or any postponement or adjournment thereof.

Print Member's Name_____

Signature_____

Date:_____, 2007

FOLD HERE AND TAPE CLOSED

stamp

Antique Wireless Association, Inc.
Ronald Frisbie
312 South 10th St.
Akron, PA 17501

ON THE INTERNET

EDITED BY **CHUCK SCHWARK**, 3108 COLFAX ST., EVANSTON, IL 60201
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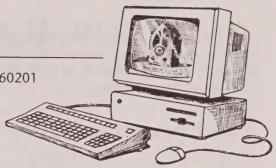

Part Sources on the Web

A few of the many sources of electronic parts that can be found on the internet are listed below. These links are for surplus jobbers, as well as dealers for new, antique, and used parts. They range from retail to surplus to hobbyist sites. I have tried to list both familiar and lesser-known sites in no particular order.

When looking for parts on the internet, be sure to do a simple search on "surplus parts." That will bring up a very long list of sites to explore. You never know when one obscure source may just have that left-handed, bifurcated "widget" you need to restore your prize set. Like they say, "parts is parts."

Alltronics Electronic Component Supply
http://www.alltronics.com/
Selling and buying electronic components and equipment. A storefront for walk-in customers. Also large mail-order catalogue.

American Science & Surplus

http://www.sciplus.com/
A great site for surplus, off-beat and unusual parts.

Playthings Of Past
http://www.oldradioparts.com/
Vintage radios, tubes, parts, books, magazines.

Mark Oppat's Radio Parts
http://www.oldradioparts.net
Dials for many models, electrolytic and mylar capacitors, volume and tone potentiometers.

Mouser Electronics
http://www.mouser.com/
A general distributor of new electronic components.

A.G. Tannenbaum
http://www.agtannenbaum.com/
Service manuals for radio, TV, VCR, antique, amateur, audio, and test equipment; books, catalogs, and magazines.

Digi-Key Corporation
http://www.digikey.com/
One of the premier mail-order and on-line parts suppliers…U.S. and Canadian sites!

Larry Bordonaro, Old Time Replications
http://www.antiqueradioknobs.com
Injection molded marbleized brown plastic bezels for 1941/42 Philco consoles, knobs, push buttons, plastic grilles, escutcheons and handles

Radio Daze

http://www.radiodaze.com
Vintage radio and electronics. Sales, service, components, supplies..

Herbach & Rademan
http://www.herbach.com/
Founded in 1934, H & R was a pioneer supplier in the radio parts field. Since then they have branched out into the electro-mechanical, scientific, security, and educational markets.

Fair Radio Sales Company Inc.
http://www.fairradio.com/
Large cross-section of surplus parts in every category.

Ocean State Electronics
http://www.oselectronics.com/
Amateur equipment, components, kits, tools, test equipment, antique radio, and much more.

Antique Electronic Supply

http://www.tubesandmore.com/
Tubes, parts and more…their domain name says it all.

Surplus Sales of Nebraska
http://www.surplussales.com/
Hard to find parts, searchable database.

Electronix Express, A Division of R.S.R. Electronics, Inc.
http://www.rsrelectronics.com/srp-indx.htm
Surplus electronics and closeouts—you name it.

Just Radios

http://www.geocities.com/justradios/
Capacitors and capacitor kits for all radios, schematic service for Canadian sets too.

EDITED BY **JOHN F. ROLLINS, W1FPZ**, 21 BALD HEAD RD, ARROWSIC, MAINE 04530
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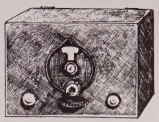

The Upcoming Bruce Kelley 1929 QSO Party

By Scott Freeberg, WA9WFA

The 1929 QSO Party is a unique yearly event where most hams build their own transmitters using the designs, techniques, and tubes that were available in 1929 and earlier. The hams then put these classic peanut whistle transmitters on the air and try and contact as many other 1929 AWA stations as possible. Since they use early designs, the transmitters have wonderful sounding signals unlike anything heard today. It is a cacophony of whooping, chirping, buzzing, clicking, drifting, swishing, swaying, warbling, and other interesting signals. This is what ham radio sounded like in 1929.

The 1929 QSO Party was started and run for many years by Bruce Kelly, W2ICE, one of the AWA founders. Upon his passing, John Rollins, W1FPZ, administered the event and renamed it "The Bruce Kelly 1929 QSO Party." John ran the get-together for many more years before handing it off to me. I hope to continue the fine traditions of W2ICE and W1FPZ.

If you need a simple and effective 1929 transmitter design, email me at wa9wfa@comcast.net and I'll email back a schematic and parts list that can be built in a weekend. It uses around eleven parts.

Figure 1 is what a well appointed 1929 station might look like. The item on the left is a station monitor used for listening to the transmitter quality and determining the transmitter frequency. The second item from the left is the Hartley single tube peanut whistle transmitter running about 5 watts output on 40 meters. Note the type 10 tube sitting on top of the PA variable capacitor. The center item is a National "dog house" receiver power supply, and to its right is a National SW-5 "Thrill Box" regenerative receiver.

Figure 2 shows WO9YQ's transmitter. It is a 1929 "TNT" using a type 45 tube. Figure 3 shows my station, which includes a National SW-3 and a 1927 MOPA, using a 27 oscillator driving a pair of 27s in parallel.

Here is the info for the 1929 QSO Party:

Dates and times: First two weekends of December; Saturday Dec. 1 through Sunday Dec. 2, and Saturday Dec. 8 through Sunday Dec. 9. Starts at 2300Z (6:00 p.m. EST) Saturday night and finishes at 2300Z (6:00 p.m. EST) Sunday night, both weekends.

Objective: Contact as many AWA members

Fig. 1. A well-appointed 1929 station (See text).

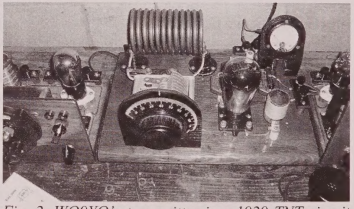

Fig. 2. WO9YQ's transmitter is a 1929 TNT circuit using a type 45 tube.

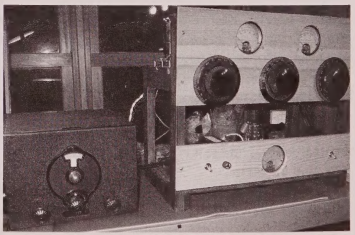

Fig. 3. The station at WA9WFA includes a SW-3 receiver and a 1027-style MOPA (see text).

as possible. Contact exchange consists of RST, Name, QTH (State such as ME or MN or NY), last two digits of the year of the transmitter's design or publication (such as 29 or 27 or 23), type of transmitter (such as TNT or TGTP or MOPA or Colpitts), and power input (such as 6W or 9W).

Rules: Transmitters must be a 1929 or earlier type of self oscillator such as the Hartley, TNT, tuned grid tuned plate, MOPA, Colpitts, etc. Tubes must have been available during or before 1929. Participants are encouraged to, but not required to, use straight keys.

Individual stations can be worked only once on 80 meters and once on 40 meters over the course of two weekends. Contacts count for scoring only if made with another 1929 or earlier transmitter. You cannot count contacts with non '29 transmitters. You can use any vintage or modern receiver that you wish.

Input Power: Transmitters are limited to a power INPUT of 10 watts or less. However, to help make East-West contacts, power may be in-

(continued on page 39)

SILENT KEYS

We record the passing of the following AWA members with deep regret.

JAMES R. "JIM" FREDERICK, K2GBR (ex W9KEE), 81, (7-31-07) was a patent attorney with the Eastman Kodak Company for 33 years. He was very active in the Antique Wireless Association (AWA), including serving on the Board of Directors and as a museum docent. Frederick was also one of the Tuesday Annex volunteer crew and served as a long time Net Control Station for the Monday Night AWA Museum net. A resident of Pittsford, NY, he was a member of the Society of Wireless Pioneers and a Volunteer Examiner. During World War II, Frederick served as a Navy radio operator on LST 1138 in the Pacific Theater. Both he and his wife "Hutch," WW2A, were pilots, owned their own aircraft and flew to many destinations in the U.S. and Canada. (Thanks to Robert Corbin, N2RSM)

HELEN LOVEGRAVE HALL KELLEY, 89, (8-12-07) was the devoted wife of Bruce L. Kelley, W2ICE, (Silent Key) one of the founders of the Antique Wireless Association. She taught English in the Bloomfield Central School and was active in the Bloomfield Dramatics Club, both acting and dancing. Helen later taught at the Franklin High School in Rochester, retiring in 1973.

Ed Gable, AWA Curator, remembered how supportive Helen was of Bruce and all the time he spent at the AWA Electronics Communication Museum. Bill Fizette recalled the hours he spent at the Kelley home when he first became AWA President and how gracious Helen was "when consulting with Bruce on the myriad of subjects that the President was responsible for then. All of us who knew her in those days will recall how very helpful she was while Bruce was building the AWA and the Museum." He concluded by saying, "She was a grand lady." Helen was a resident of Holcomb, now Bloomfield, before moving to Canandaigua in 2002. (Thanks to Dr. Bill Fizette, W2DGB, and Ed Gable, K2MP)

THEODORE PHILLIPS, 94, (5-25-07) was an Equipment Engineer with the New England Telephone Company from 1948 until he retired in 1979. He was a member of the Dover Telephone Pioneers, New Hampshire Antique Radio Club and the AWA. Phillips was a member of the National Guard 172nd Field Artillery from 1935 to 1941, when the unit was federalized for World War II. His war service included the campaigns in North Africa, Sicily and Italy. Phillips was awarded the Purple Heart for wounds received while serving with the Ranger Task Force during the Italian invasion as well as a Bronze Star. He left the Ordinance Department of the army with the rank of Captain in 1945. Phillips was a resident of Dover, NH. (Thanks to Mrs. Theodore Phillips)

Please submit all information about members who have become Silent Keys to Charles S. Griffen, W1GYR, 1225 New Britain Avenue, West Hartford, CT 06110-2405. Silent Key notifications must confirm the person's death by one of the following means: a letter from a family member, a copy of a newspaper obituary notice, a copy of a death certificate, a letter from the family lawyer or the executor or mail returned by the U.S. Postal Service marked "Deceased."

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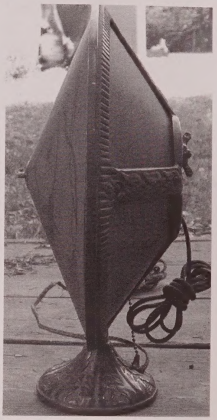
Aladdin's "Glo-Cone" Loudspeaker

By Buford Chidester
785 Locust St., Mount Wolf, PA

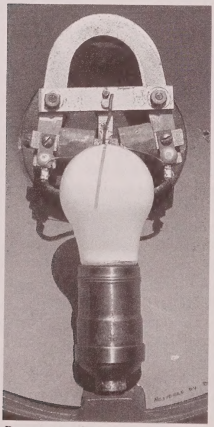
Some of us can remember grandparents who used the large Aladdin kerosene lamps for their lighting needs. These were manufactured by the Aladdin Mantel Lamp Company, which was founded in Chicago, Illinois in 1908. Later, in 1949, they changed their name to Aladdin Industries and moved to Nashville, Tennessee.

During the 1920s era, the Aladdin Manufacturing Company of Muncie, Indiana (assumed to be a division of the Aladdin Mantel Lamp Co) decided to jump on the radio bandwagon and produce a cone speaker. This article describes the "Glo-Cone" model that was manufactured and distributed by Aladdin.

It was natural for a lighting company such as Aladdin to design and manufacture speakers with some type of illumination. This model, as can be seen from the photographs, actually incorporated an internal 25 watt Mazda 120 light. Its pull chain on/off switch protruded from the back of the double-cone frame assembly. The speaker cone glowed when the light was switched on, giving the product its name. To replace the light bulb, one simply loosened the front cone retainer nut, located at the apex, and pulled the front cone off. This exposed the internal light assembly.



"Glo-Cone" speaker is formed from two paper cones held in an art metal frame and sandwiching the driver unit and a 25-watt lamp.



Removing front cone exposes the "Glo-Cone's" light source and driver unit.

By today's standards this speaker design would be considered a fire hazard; and the unit should definitely not be left unattended while the light is on. The light bulb generates a lot of heat and the speaker design does not allow for venting. This causes the frame and cone to get very hot after a short time of operation.

The internal light gives the cone, which has a beautiful bird and floral design painted on the front, a nice orange glowing background. Actual colors of the bird are a light rust brown with blue wing feathers and black highlighting. The long tail feathers continue around the entire top of the cone to form a type of bell flower design at the extreme bottom right side.

Looking carefully at the design, one can see the bird is sitting on a long vine that is draping down from a leafy area at the cone top. Additional vines are randomly draped across and down the cone to form an imaginary forest scene. The bird's posture suggests that it has just arrived and is on alert for any danger that may be lurking in the vines.

Both front and back of the cone are a burnt orange color that allows enough light penetration of light to produce a soft glow. Overall dimensions of the speaker are approximately 14½" H × 12½" W × 5" D.

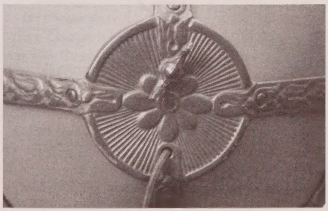
The floating armature reproducer design has a mechanical volume

control adjustment located on the back. The control looks like a vintage clock key. Unlike the modern day resistive volume controls, the mechanical control changes the position of the reproducer armature with respect to the large horseshoe magnetic poles, thus controlling the volume. In an unbalanced position (armature closer to one pole that the other), the speaker volume is lowered. The balanced position (even spacing from either magnetic pole) produces the greatest volume.

As of this writing, the Aladdin "Glo Cone" speaker is very rare, with only one known example. The cone shown is a reproduction, with the design and colors taken from the remaining parts of an original cone. The frame is cast metal with a finish of bronze highlighted with a leaf and floral design in forest green.

A reference for this speaker can be found in *Radio Retailing* for November, 1927.

The front cone is decorated with an extravagantly painted bird posed among vines and flowers.



Volume control "key" protrudes from center of rear cone's frame.

AMATEUR RADIO, cont. from page 37

creased to 20 watts INPUT between the hours of 0500Z (12 Midnight EST) and 1300Z (8 a.m. EST). Note this is INPUT power. Power input is calculated by multiplying PA plate voltage x total PA plate current. Example: my plate voltage is 300 volts dc, and my plate current is 30 ma, so my total input power is 300 x 0.030 = 9 watts.

Frequencies: The QSO Party operates in both the 80 meter and 40 meter cw bands. Activity tends to cluster around 3550 to 3580 kHz and 7030 to 7060 kHz, plus or minus depending on QRM, cw nets, and RTTY contests. If you hear 'em, work 'em.

Logs: e-mail your 1929 log to Scott at wa9wfa@comcast.net or mail it to him at Scott Freeberg, WA9WFA, 327 Wildwood Avenue, White Bear Lake MN 55110, Tel: 651-653-2054. Emailed logs must be in the 1929 QSO Party log format otherwise it will be difficult to score you. I will be mailing out paper logs in late October/early November, or you can email me and request a log either in PDF or Microsoft Word format.

Scoring: Scoring is simple. Add up the number of valid 1929 QSOs on 40 meters and 80 meters. Example: if I make 15 QSOs on 80 meters, and 10 QSOs on 40 meters, my final score is 25. All submitted AWA logs will be scored and included in the posted.

Good luck to all participants! 73, Scott WA9WFA

2007 O.T. DX Contest Results
By Randy Haus, KB2PLW

The AWA O.T. DX contest in April, 2007 had a total of twenty-one participants, which is a troubling drop in numbers from previous years. Several rules changes were discussed at the amateur radio seminar at the August conference which will hopefully result in increased participation in 2008.

First place winner for the 2007 event is Harold Borchers KB0ROB (MN) with 222 points. He was using a complete 1959 Hallicrafters station. Congratulations to Harold for his outstanding performance under difficult conditions.

The 2008 O.T. DX event will be co-managed by Randy Haus, KB2PLW and Bruce Howes, W1UJR. Acting as Contest Manager-in-Training in 2008, Bruce has graciously volunteered to take over the event from Randy in 2009. Randy will be stepping down after ten years of managing the event.

The 2008 event will be held in April. Look for details in an upcoming *AWA Journal*.

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E-MAIL: rparks9@cox.net. *PLEASE INCLUDE SASE FOR REPLY.*

Bring Historical Circuits to Life On Your Workbench!

12-Volt Space Charge Tubes

By Jeff Duntemann K7JPD
145 Stanwell St., Colorado Springs CO 80906
jeff@duntemann.com

Introduction

As anyone who has worked on car radios up to the early 50s can attest, vibrators are nasty, buzzing, sputtering, ozone-belching nuisances that live hot and die young. So it was in the mid-1950s that Tung-Sol decided to put an end to them. Their scheme relied on a long-established but little-known piece of vacuum-tube physics: The space-charge effect.

In a nutshell, a tube operating in space-charge mode uses the first grid (the one closest to the cathode) as a sort of particle accelerator, giving electrons a head start toward the weakly charged anode. The second grid then serves as the control grid. This boost could compensate for plate voltages as low as six or even three volts in some circuits, and would allow car radios to operate on 12VDC without the canonical 180VDC vibrator power supply.

Transistors existed in 1956, when Tung-Sol's tubes reached the market, but they did not work well at RF. Neither could a vacuum tube working at 12V deliver significant power. However, TO-3 and TO-36 germanium audio power transistors had recently come on the scene, and with one (sometimes two) of those to drive the speakers, the last real need for a high-voltage supply vanished.

Between 1956 and 1962 Tung-Sol, GE, RCA and other manufacturers released quite a few different types, all in 7- and 9-pin miniature packages. I know of at least 45 types, all of which are listed on my Space Charge Tubes Web page (1), and most of the listings include links to full data sheets. The tubes are not rare, and can be had inexpensively from online merchants like Antique Electronic Supply.

Interestingly other, much older, tubes can be coaxed into decent operation at 12V or less. The star here is the Type 49 tetrode, used in the well-known series of "Hiker" receivers published in New Zealand's *Lamphouse Annual* starting in the 1930s (2). Later versions used other tubes, including the 1C5 and 1Q5 farm radio pentodes.

The 6C6 pentode is used in several circuits in the 1945 *Popular Science* book *Radio for the Millions*, available used online for as little as $5. One 6C6 circuit in that book uses both the control and suppressor grids as accelerators, and will work with as little as 3V DC on the plate. (Unlike most pentodes, the 6C6's suppressor grid comes

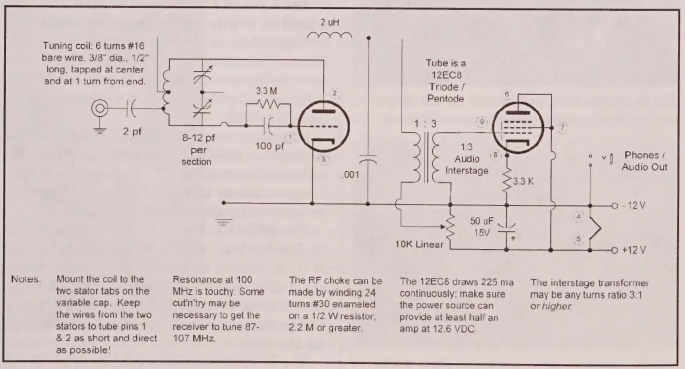

2 uH
Tuning coil: 6 turns #16 bare wire, 3/8" dia., 1/2" long, tapped at center and at 1 turn from end.
3.3 M
2 pf
8-12 pf per section
100 pf
.001
Tube is a 12EC8 Triode / Pentode
1 : 3
1:3 Audio Interstage
3.3 K
Phones / Audio Out
- 12 V
+12 V
50 uF 15V
10K Linear
Notes.
Mount the coil to the two stator tabs on the variable cap. Keep the wires from the two stators to tube pins 1 & 2 as short and direct as possible!
Resonance at 100 MHz is touchy. Some cut'n'try may be necessary to get the receiver to tune 87-107 MHz.
The RF choke can be made by winding 24 turns #30 enameled on a 1/2 W resistor; 2.2 M or greater.
The 12EC6 draws 225 ma continuously; make sure the power source can provide at least half an amp at 12.6 VDC
The interstage transformer may be any turns ratio 3:1 or higher.

Fig. 1. "One for the Road" VHF Receiver Schematic.

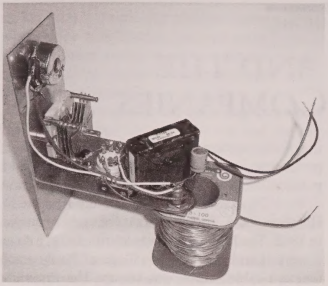


Fig. 2. "One for the Road" Under Construction.

out to its own pin and is not tied to the cathode.)

Using older tubes designed for battery sets in space-charge service has an advantage over the later car-radio tubes: Heater current. Some of the car-radio tubes require as much as 450 ma at 12VDC for the heaters. A single D cell will keep a 1Q5 lit for a good long while—and you can use one or two 9V transistor batteries for the B supply.

Space-Charge at HF and Up

Although designed for BCB AM service, nearly all of the car-radio space-charge tubes work well up to the top of the HF spectrum. *QST* published a number of space-charge HF mobile converter circuits in the 1956-1964 era, nearly all using pentagrid converter tubes. Most of these are simple 1-tube affairs, but there is a very sophisticated switched five-band converter published in the July, 1964 issue, "A Complete Mobile Package, Part 2." The circuit uses a 12EK6 pentode RF amp and a 12AD6 converter, and (alas) 1600 KHz IF cans. Perhaps a better place to start is "A 10-Meter Mobile Converter" from *CQ*, August 1963. Using a single 12AD6, you could lash it up in an hour, and by tweaking the converter LC tank you can make it work almost anywhere in the HF spectrum.

I've seen only a few VHF circuits for space-charge tubes. My favorite is "One for the Road" in *Popular Electronics*, July 1962, p. 44. The 12EC8, one of the few dual-section space-charge tubes, operates as a superregenerative detector and headphone audio amp. The circuit was designed for AM aviation reception in the 108-125 MHz range, but I changed the LC values and brought it down into the FM broadcast band, from which it slope-detects slightly screechy (but still serviceable) FM audio. (See Figure 1 for the schematic as I built it and Figure 2 for a photo of the unit under construction.)

A slightly odd "enhanced modulation" QRP AM rig for 50 MHz is discussed online (3) (Scroll down to the title "Enhanced Modulation.") A pair of 12K5 tubes in a push-pull 25 MHz crystal oscillator doubles to 50 MHz with another 12K5, modulated by four 2N242 audio transistors, with the rig delivering 2.5 watts AM output. It's a good illustration of how to use the 12K5 audio tube at RF.

Low-Voltage, Low-Volume Audio

Modern tube-audio fanatics have made good use of that interesting 12K5 audio driver tube, designed for use in car radios to develop sufficient audio power (about thirty milliwatts) to drive Fifties-era audio power transistors like the 2N301. The *Sopht Amp* is a three-stage audio amp using a 12U7 dual triode to drive a 12K5 "power" pentode. The *Sopht* is an easy weekend project (more like an evening if you're good with a soldering iron) and a good first effort in space-charge tubing. It provides enough speaker volume for use in a quiet office, with excellent fidelity. (Many people use it to play MP3 song files from their computers!) Spice (computer circuit simulation) models for both the 12U7 and the 12K5 have been published online (4), along with several variations on the basic circuit.

Be Willing to Experiment!

An old timer once told me that you build a good radio twice: Once as a lashup on a board, and a second time—once you've tweaked it to peak performance—on a chassis in a cabinet. Space-charge circuits are a little offbeat, and what you think you know may not apply. My first space-charge project was a lashup of a simple 12V car radio, pulled right from the 1962 *RCA Receiving Tube Manual*. (See Figure 3.) I was

(continued on page 45)

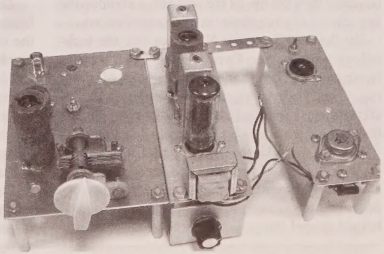


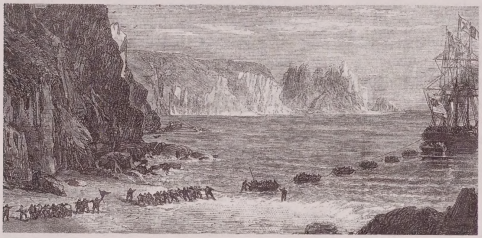
Fig. 3. A 12V Car Radio Lashup.

BY IVOR HUGHES

MARCONI AND THE TELEGRAPH COMPANIES

I recently took a trip to Cornwall, England to visit a couple of historic sites that figured significantly in long range international communications. Both of these sites are located at the tip of England near Land's End. It is an area of magnificent cliffs, sweeping bays and hidden coves, carved out by the full force of the Atlantic Ocean.

The first site I visited was the home of the world's largest submarine telegraph station. This is now a unique historical telegraph museum



The landing of the first cable at Pothcurno in 1870.

buried deep in tunnels carved into granite cliffs, giving it a sort of "Cheyenne Mountain of the telegraph era" feel. The second site was where Marconi had built his high power wireless transmitter to attempt the impossible—transatlantic wireless communications.

These two locations are relatively close to each other, a fact that the telegraph companies used to their advantage. Realizing that Marconi and his wireless posed a potential threat to their business they set up, as we will see, a clandestine spy station to eavesdrop on his transmissions.

By the middle of the Victorian era, the technology employed in Cyrus Field's 1866 transatlantic cable success had reached a point of maturity. After years of experimentation, both the instrumentation and the undersea cables themselves were much improved.

By this time, Great Britain had a vast worldwide Empire to administer. The need for reliable and timely communications to her far-flung outposts had never been more important. This need helped propel the growth in undersea cable laying. Cable systems provided independence and protection from interference (both military and political).

By 1870 a cable had been laid from England to Bombay, India. This was extended on to Australia in 1872. The English end was terminated at a cove close to Lands End in the village of Porthcurno, where a cable station was set up. The firms involved in this venture merged to form the Eastern Telegraph Company.

The importance of this telegraph station grew as the cable network expanded to encompass North and South America, South Africa, New Zealand and Hong Kong. Eventually 14 cables were in operation, making the installation the world's largest submarine telegraph station. It continued in operation until 1970.

Fortunately, following its closure, the site and equipment were retained to form the "Museum of Submarine Telegraphy." The unique aspect of the museum is that it is subterranean, contained in two large tunnels hollowed out of the granite cliffs, complete with blast proof doors and internal power generators. The tunnels were excavated during World War II, when the telegraph network took on strategic importance. The cable systems were far less susceptible to interception and jamming than wireless communications.

The museum has on exhibit a wide selection of historic pictures, models and equipment showing the development from the first submarine telegraph in 1850. Included are instruments of Morse, Cook and Wheatstone, and Thompson. Later era equipment includes regenerators, Murehead transmitters, and keyboard perforators. Some of the original rooms are still intact—including the cable fault location laboratory, the instrument repair shop and the power generation room.

Located several miles away from Pothcurno, across the wide sweep of Mount's Bay, is the historic site at Poldhu. This is where Marconi set

212 ROTAX RD., NORTH FERRISBURG, VT 05473

up his 1901 transatlantic wireless station. This windswept headland is located near Lizard Point, the most southerly point in Britain, where a memorial on the cliff commemorates Marconi's achievement.

Searching around in the adjoining cow pasture, one can find concrete footing and guying blocks used for the aerials as well as remains of the foundation of the station building. *(See Gerry Bracken's letter in "Letters to the Editor" for a description of similar footings at the site of a later Marconi installation, the receiving station near Clifden, Ireland—ed)* In 1900 this was a fairly remote and isolated location, which suited Marconi as it gave him a clear view out to sea while providing an element of secrecy from his competitors and critics.

Marconi had set his sights on spanning the Atlantic. He had been progressing with his wireless system, demonstrating that he could communicate over greater and greater distances. He had successfully transmitted beyond the line of sight over a distance of 150 miles, confirming his belief that the curvature of the earth was not a problem.

He had also determined that the higher the aerial the further the signal would travel. However to cross the Atlantic he needed to radiate significantly more energy than he had been obtaining from Leyden jars; in fact some 100 times more power was deemed necessary.

Marconi's group included his advisor George Kemp, engineer R.N. Vyvyan and scientific advisor Dr. J.A. Fleming. Construction on the site started in the summer of 1900. Bringing in some of the large components to such a remote area must have presented quite a challenge.

A 30 HP single cylinder Hornsby-Ackroyd oil engine and a 25 kW Mather and Platt alternator along with transformers, condensers, jigger coils and spark gap components, hundreds of feet of guy lines and aerial wire all had to be hauled in. Also needed at the site were poles for the ring of twenty 200-ft. high wooden aerial masts. These would support an inverted cone aerial array.

A similar wireless station was needed in America, and R. N. Vyvyan went over to oversee its construction. The station was located at Wellfleet on Cape Cod.

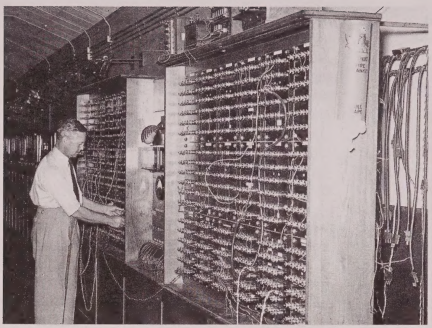
In September of 1901, a gale toppled the massive aerial array at Poldhu. A few weeks later the masts at Cape Cod met the same fate. It was a devastating blow. Working furiously, the debris was cleared at the Poldhu site and a smaller and simpler fan array supported by two poles was constructed. Marconi modified his plans and decided to try for a transatlantic transmission over the shorter distance to Newfoundland rather than to Cape Cod.

In the Poldhu transmitter, the alternator output was coupled to the primary of a 2000 to 20,000 volt step-up transformer. The transformer fed two spark gaps operating in cascade and coupled by a jigger (high voltage air core transformer) with the output of a second jigger connected to the aerial and earth. The values of capacitors and jigger coils were arranged to broadly set the operational frequency. Keying was accomplished by switching in and out a choke in the primary circuit.

Construction of one of the cable station tunnels circa 1940.

In November, Marconi, Kemp and Paget left for St. Johns, Newfoundland. Shrouded in secrecy, the trip was made ostensibly to experiment with ship-to-shore communications. On 12 Dec 1901, Marconi used a kite to send up an aerial at St. Johns. With it he was able to receive the test signal transmitted from Poldhu—the Morse code for the letter "S." Elated, he sent a message to Poldhu confirming the success via the Anglo-American transatlantic telegraph cable.

Here the story takes an interesting twist, as I learned from my visit to the Porthcurno Telegraph Museum. As documented by John Packer in "The Spies of Wireless Point," Marconi's success was a wake-up call to the telegraph companies. They suddenly realized what a threat long-distance wireless technology posed to their



Main terminal board for interchanging telegraph lines and equipment.

businesses.

Their first action was to tell Marconi to cease and desist, since the Anglo-American Telegraph Company had a monopoly on communications in Newfoundland. Next it was necessary to determine how big a threat wireless posed and to see if it could be derailed somehow.

The telegraph companies determined that they had to find out first hand how Marconi's wireless really worked and how much progress he was making. Did the system work 24 hours a day, like cable, or only during certain times? How fast could messages be sent? Were the messages reliable or full of errors? In short was Marconi going to put them out of business?

To get this information, they needed to spy on Marconi's operations, and a number of plans were put into action. Marconi stock was purchased so board meetings could be attended. The Eastern Telegraph Company at Porthcurno, which was in a strategic location, undertook to intercept Marconi's wireless transmissions.

To help in this clandestine operation they needed someone with wireless knowledge and hired Nevil Maskelyne to erect an aerial and wireless hut on the cliff top above Porthcurno. This site was several miles away on the other side of the bay from Marconi's transmitter. According to John Packer, the Directors' minutes for the Eastern Telegraph Company, normally highly detailed, appear purposely vague on this clandestine wireless project.

Tower commemorating Marconi's work at Poldhu.

What Maskelyne discovered was the lack of privacy associated with wireless transmissions, the lack of immunity to interference, and Marconi's difficulties in developing selective tuning (syntony). This information of course was communicated to the press as a way to discredit wireless technology and embarrass Marconi.

To add further embarrassment, Maskelyne carried out another attack. Dr. Alexander A. Fleming was set to present a lecture on wireless at the Royal Institution in London in 1903. Part of his presentation was to demonstrate reception of a transmitted message from Poldhu. However as the lecture got underway the Morse printer connected to the receiver started to print out embarrassing messages that certainly weren't coming from Poldhu!

Maskelyne was sending the rogue messages from his own transmitter not far away from the

Foundations of the Poldhu wireless station.

Royal Institution. Fleming was irate and called the prank "scientific hooliganism"—but had no idea where the false messages were coming from. Maskelyne eventually owned up, stating that he only wanted to demonstrate the system's lack of privacy and its susceptibility to interference.

Eventually the Eastern Telegraph Company began to see the benefits of wireless, especially for ship-to-shore communications, and started installing it on their cable laying ships. As wireless usage grew, the British Government believed that an integrated network of cable and wireless services would best serve the interests of the Empire. A merger between some divisions of the Marconi Company and the submarine cable companies—forming the Cable and Wireless Company—was initiated in 1934.

The author would like to thank the Porthcurno Telegraph Museum for providing photographs and information.

BREADBOARDING, *continued from page 41*

able to rework the converter to bring it up to 3.5 MHz, and added a BFO. It was ugly, but it taught me a lot about how tubes work at low voltages.

Finally, over the last thirty years or so, some of us have forgotten the "one hand in the pocket" rule that we followed when working on tube gear. Poking at circuits with bare fingers has become common in the solid-state era, and with space-charge circuits, you can poke away (and allow your kids to tinker as well) without fear of electrocution. Have fun!

NOTES

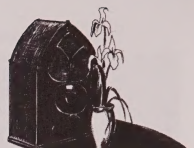
(1) http://www.duntemann.com/12vtubes/12vtubesindex.htm
(2) http://www.oldradios.co.nz/hikers/
(3) http://www.amfone.net/AMPX/64.html
(4) http://http://www.thomasdog.com/amps/sopht/index.htm

THE POWERIZER MYSTERY SOLVED

A reader of my column on the "Powerizer" In the July, 2007 *Journal* has confirmed my theory that the unit was intended to convert battery radios to AC. I was delighted when a copy of Powerizer Junior Operating Instructions came over the transom. My apologies to the sender, whose name I think is well known to readers. But it was written on the mailing envelope only, and flew into the circular file. The copyright date on the pamphlet is 1928. Though the Model P- 171 Powerizer Junior is half the size of my model PXY-1 the two units are used similarly. They are, and I quote, "designed for the set owner who, having a good battery set, desires to convert it to complete AC operation employing the new AC tubes and who believes that the output of the 171 tube is sufficient for his needs." The set owner could either rewire his filament connections or use a Powerizer wiring harness, with adapter sockets, specifically designed for his set. If you had an A-K, Fada, Freed-Eismann, Kolster, Radiola 16, Sonora, even certain early Zeniths, a Powerizer could bring you right up to date and do away with that nasty car battery under the table. The Radio Receptor Company, maker of the Powerizers, sold a number of kluge-type accessories to help the determined owner free himself from batteries while avoiding the purchase of a new AC set. External volume controls, tube adapters, and series grid resistors could all be had from R-R by mail. The Powerizer market probably dried up about 1929, when AC-only sets had become widely sold.

—Dick Parks

RECENT RADIO, TV AND ENTERTAINER OBITUARIES



COMPILED BY **CHARLES S. GRIFFEN W1GYR**
1225 NEW BRITAIN AVE., WEST HARTFORD, CT 06110-2405

Note: When known, the date of death is indicated in parenthesis.

DANNY BARCELONA, 77, (4-1-07) drummer. Barcelonia played drums with *Louis Armstrong and His All Stars* from 1958 until the group disbanded at the time of Armstrong's death in 1971. Barcelona performed on more than 130 recording sessions and soundtracks with Armstrong including "Hello, Dolly!" (1964) and "What a Wonderful World" (1968). A self-taught drummer, Barcelona joined the Trummy Young Orchestra while he was in high school in 1948. Three years later he formed his own sextet, the Hawaiian Dixieland All Stars and toured his native Hawaii and the Far East. He left for the mainland in 1957 and a year later he was recommended by Trummy Young, now playing trombone for Armstrong, as a replacement for Barrett Deems. Barcelona later returned to Honolulu and played with the Bernie Halmann Group, worked at a music shop and gave drum lessons before moving to California in 1979.

LAYNE BEATY, 93, (5-11-07) pioneer farm journalist. Beaty was Chief of Radio and Television for the U.S. Department of Agriculture (USDA) from 1955 to 1980. He also broadcast farm news on radio programs including *The National Farm and Home Hour* (NBC), *American Farmer* (ABC) and *Columbia's Country Journal* (CBS). From 1960 to 1980 Beaty directed and emceed *Across the Fence*, a weekly syndicated television program of agricultural and consumer information produced by the USDA. In 1937 he began his career in Oklahoma City, broadcasting a weekly public service program, *Oklahoma Farm and Home Hour* on WKY(AM). Six years later he became the Farm Editor for WBAP(AM) in Fort Worth. There he broadcast an early-morning farm program and started appearing on on the station's television outlet when it began broadcasting in 1949. Beaty was elected to the *National Association of Farm Broadcasters Hall of Fame* in 1988.

MARION "BUDDY" CHILDERS, 81, (5-24-07) trumpeter. Childers, a self-taught musician, was hired by Stan Kenton in 1942 when he was 16 years old. He played with the band on and off until 1954. During absences from Kenton, he worked with Benny Carter (1944), Les Brown (1947), Woody Herman (1949), Frank Devol (1950-1951), Tommy Dorsey (1951-1952), Georgie Auld (1954) and Charlie Barnet (1954). He frequently held the position of lead trumpeter. Later Childers did free-lance work in Los Angeles and Las Vegas. In the 1980s he served as the Musical Director for Frank Sinatra, Jr. and remained with him when the Junior Sinatra was asked to lead the Frank Sinatra Orchestra. In 1993 he left the Sinatras and formed a big band in which he performed for many years.

VILMA EBSEN 96, (3-12-07) dancer. Vilma and her brother Buddy were a popular vaudeville and supper club dance duo once known as "The Baby Astaires." They made their Broadway debut in 1928 as dancers in *Whoopee* with Eddie Cantor followed by *Flying Colors* (1932) with Clifton Webb and *The Ziegfled Follies of 1934*. The next year they came to Hollywood to appear in the MGM musical *Broadway Melody of 1936* starring Eleanor Powell. It was Vilma's only movie appearance. Buddy went on to appear in other films and star in the television series *The Beverly Hillbillies* (CBS 1962-1971). She married and returned to the stage in the Howard Dietz-Arthur Schwartz musical *Between the Devil*, which ran on Broadway from 1937 to 1938. Vilma retired from the stage and, with her sister Helga, started the Ebsen School of Dancing, which they operated from 1943 until the mid-1990s.

RAY ERLENBORN, 96, (6-4-07) sound effects pioneer. Erlenborn's career as a sound effects artist began on CBS Radio in 1937 and ended with CBS Television in 1977. Earlier he had been a child actor in vaudeville, appeared in a silent film comedy and was the writer, producer and master of ceremonies for *Marco Dog & Cat Food Juvenile Revue* (1933). This background proved useful when he was offered a sound effects job with KNX(AM), the CBS affiliate in Los Angeles, in 1937.

Erlenborn produced sound effects for many radio programs including *Al Pearce and His Gang*, *Amos 'n' Andy*, *Blondie*, *Gene Autry's Melody Ranch*, *Suspense* and *The Texaco Star Theater*. At CBS TV he did sound effects for

such programs as *The Carol Burnett Show*, *The Jack Benny Show*, *Playhouse 90*, *The Red Skelton Show* and *The Smothers Brothers Comedy Hour*. Erlenborn also did sound effects for cartoons and Stan Freberg and Spike Jones comedy albums. (For additional information see *Radio Sound Effects* by Robert L. Mott)

THOMAS E. FANELLA, 60, (5-28-07) executive. Fanella was President and Chief Executive Officer of the KTEH Foundation, parent company of San Jose public television station KTEH and Central Coast public television station KCAH from 1988 until his death. He was a leading advocate of KTEH's merger, last year, with San Francisco's KQED. This created a new organization—Northern California Public Broadcasting. Fanella served as Executive Vice President for Television Broadcasting in the new entity. Prior to 1988 he was Chief Operating Officer for QED Enterprises and Vice President for Marketing for Metropolitan Pittsburgh Public Broadcasting. From 1975 to 1984 he was Vice President for Marketing for WCNY, a public television station in Syracuse, NY. During his career he produced many award-winning documentaries and was a mentor to many public broadcasters who refer to themselves as "Tom's Kids."

HARRY FRAZIER, 77, (5-26-07) actor. Frazier was often cast in the roles of Falstaff and Santa Claus because of his full white beard, rotund body, rosy-cheeks and twinkling eyes. He played Santa Claus in several television movies, including *The Elf Who Saved Christmas* (1992) and had roles in other films such as *McCabe & Mrs. Miller* (1971). Some of Frazier's television credits include guest roles on *Batman*, (ABC), *Cheers* (NBC), *Hunter* (NBC) and *Hill Street Blues* (NBC). During the 1970s he had leading roles in many Shakespearean plays at the Will Greer Theatricum Botanicum in Topanga, CA, including "The Tempest," "A Midsummer Night's Dream," and "Henry IV." Frazier began his career in the late 1950s acting in regional theaters and was a member of the Milwaukee Repertory Theater and later performed with the American Conservatory Theater in San Francisco.

JERRY GIRARD, 74, (3-25-07) sportscaster. Girard, who was born Gerard Alfred Suglia, was a sports anchor for WPIX(TV) in New York City from 1974 to 1995. Girard joined the station as a news writer in 1967 and in 1974 moved to the anchor desk. During his broadcasts he avoided the traditional practice of showing highlights of a game to focus on key plays that he thought would blend in with his commentary. Earlier he worked as a disc jockey for radio stations in Myrtle Beach, SC, Altoona, PA and Gary, IN before returning to New York City to work as a record librarian for WNEW(AM). Rather than accept a demotion Girard resigned in 1995 and was replaced by Sal Marchiano.

ROCKIN' RAY GOODING, 68, (5-13-07) radio personality. Gooding was the host of *Sunday Night Hall of Fame* which aired on WBT(AM) in Charlotte, NC from 1971 to 1995, the longest-running program in the city. It featured "spinning finger-popping rock 'n' roll from an era of sock hops and tail fins." The show was cancelled when the station moved from music to a talk show format.

Gooding began his Charlotte career at WGIV(AM) in 1960, then moved to WPRL(AM) in 1968 and three years later joined WBT as the first African American announcer. He also served as the station's Public Affairs Director and was instrumental in the station's "Penny-Pitch" charity, which raised money for children experiencing difficult times. Gooding used his considerable influence to deal with the city's integration problems preaching the virtues of values and reason.

DABBS GREER, 90, (4-28-07) character actor. Greer was best known for his portrayal of Rev. Robert Alden on the television adventure/drama series *Little House on the Prairie* (NBC 1974-1983). Some of his other TV roles include the storekeeper Mr. Jonus on *Gunsmoke* (CBS 1955-1960), Coach Ossie Weiss on *Hank* (NBC 1965-1966), Minister Henry Novotny on *Picket Fences* (CBS 1992-1996) and the grumpy grandfather on *Maybe It's Me* (The WB Network 2001-2002). He also appeared in such films as *Invasion of the Body Snatchers* (1956), *It! The Terror from Beyond Space* (1958) and *The Green Mile* (1999). Greer's first motion picture was in 1949 in a non-credited part in *Reign of Terror*. Greer was an administrator, teacher and actor at the Pasadena Playhouse Theater School from 1943 to 1950, but left to begin acting full time. Born Robert William Greer, he adopted his mother's maiden name, Dabbs, as his first name.

DON HERBERT, 89, (6-12-07) science teacher. Herbert was host of the children's science program *Watch Mr. Wizard* seen on NBC-TV from 1951 to 1965. The show, which was directed at youngsters between 8 and 13, was designed to arouse their interest in science. It earned a Peabody Award in 1953. Herbert used household items in his TV lab and was assisted by young people. The program made its debut in 1951 on WMAQ(TV), the NBC affiliate in Chicago, but later originated in New York City. After the program went off the air he was seen on general-audience shows, *How About* and

Exploration and in the 1980s *Mr. Wizard's World* was carried by the Nickelodeon cable network. During the 1960s and 1970s about half the students applying for admittance into doctoral programs in science and medicine at Rockefeller University, credited their interest in science to having seen the *Watch Mr. Wizard* program.

EDWARD H. HEWSON, JR., 73, (5-14-07) executive. Hewson worked for KING Broadcasting in Seattle from 1963 to 1993. There he started Northwest Mobile Television, a subsidiary that was one of the first in the country to use trucks equipped with broadcasting equipment to provide on-the-scene news and sports coverage. In the early 1970s Hewson helped start another subsidiary, King VideoCable, which provided cable service to more than half a million subscribers in markets from Los Angeles to Minneapolis. He was inducted into the Cable Television Hall of Fame in 2002. Hewson later started Coast Communications, a small cable, telephone, and Internet firm serving the Washington coast. His son, Ed Hewson III, said his father "literally climbed poles and strung cable to get that company started."

DON HO, 76, (4-14-07) entertainer. Ho, the legendary "King of Hawaiian Entertainment" performed for thousands of tourists for over 40 years wearing raspberry-tinted sunglasses and singing his signature song "Tiny Bubbles." Other hit songs include "Pearly Shells," "I'll Remember You" and "With All My Love." For many years he performed at the Waikiki Beachcomber Hotel hosting a show which included songs, jokes, Hawaiian history and audience participation.

Ho's television credits include *The Don Ho Show* (ABC 1976-1977), a cameo appearance on *The Brady Bunch* (ABC 1972) and guest slots on many shows including *The Hollywood Palace* (ABC 1967-1968), *The Andy Williams Show* (NBC 1969-1970) and *The Tonight Show Starring Johnny Carson* (NBC 1971-1972). Ho began his career singing in the family's cocktail lounge, Honey's, in Kaneohe, Hawaii. This was followed by engagements at Duke's in Waikiki in 1962 and top supper clubs on the mainland.

HOWARD L. LESTER, W2ODC, 83, (4-16-07) electrical engineer. Lester was one of the inventors of color television at RCA as well as tracking radar that locks onto moving targets. He also worked on a collaborative project between General Electric Company and Ericsson of Sweden that was the basis of much of today's cellular telephone networking technology. Lester retired from General Electric in 1993. A U.S. Navy veteran, he taught radio and radar classes at the Navy Pier in Chicago during WWII.

Lester gave many hours of his time to help local, state and federal agencies solve communications problems including many in the Schenectady, NY area. An avid amateur radio operator, he became well known for his work in forming the Upper New York Repeater Coordination Committee after the sudden collapse of the Northeast Repeater Association in the early 1970s. Lester was a Fellow of the Radio Club of America.

TOM MOORE, 88, (3-31-07) executive. Moore was President of the ABC Television Network, a division of the American Broadcasting Company, from 1963 to 1968. From 1958 to 1962 he was head of programming for ABC. His use of demographics changed the basis on which television time is sold and how programming is developed to appeal to a particular age group. By targeting ABC's shows to younger viewers (18 to 49 years of age) he made the network competitive with CBS and NBC. Some of Moore's successful programs included *77 Sunset Strip*, *The Untouchables*, *Peyton Place* and *My Three Sons*. He was also instrumental in developing the ABC Sports Division, which won a number of Emmy Awards for *ABC's Wide World of Sports* and its Olympics coverage. Moore began his career at CBS in 1952 and joined ABC in 1957. He left ABC in the 1970s to run Tomorrow Entertainment.

MICHAEL D. O'HARA, 46, (3-29-07) executive. O'Hara led the Thomson Consumer Electronics team that developed the 18" satellite television dish antenna and the digital receiver for RCA's DirectTV Digital Satellite System. To test consumer reaction, the product was introduced in Jacksonville, MS in 1994 and became the most successful consumer electronics product in history until DVD players were marketed. He joined Thomson in 1987 and was named Executive Vice President of Worldwide Sales and Marketing for Thomson's TV, Audio/Video, Accessories and Communications Divisions in 2000. O'Hara left the firm last fall to form the Indianapolis-based consulting firm Summus Ventures.

LEAVITT J. POPE, 83, (4-18-07) broadcast pioneer. Pope co-founded WPIX(TV) in New York City in 1948 and served as President and Executive Officer from 1975 to 1993. It was the first independent television station in New York City and one of the first independent stations in the nation. WPIX became affiliated with Warner Brothers in 1995 and is now known as the CW Network. He negotiated broadcast contracts with the Yankees and New York Giants baseball teams, the Giants and Jets football teams for preseason coverage and Madison Square Garden. During his administration the station received a

Peabody Award, several Emmy Awards and a New York State Broadcasters Awards. Pope served in the U.S. Army during WWII and upon discharge joined the staff of the New York Daily News.

TOM POSTON, 85, (4-30-07) comic actor. Poston was seen on nearly 100 television programs but will be remembered by many for his role as George Utley on the situation comedy *Newhart* (CBS 1982-1990). Some highlights of his television career included *The Steve Allen Show* (NBC 1956-1959, ABC 1961), *To Tell the Truth* (CBS 1958-1967), *What's My Line?* (CBS 1958-1966), *On the Rocks* (ABC 1975-1976), *We've Got Each Other* (CBS 1977-1978), *Mork and Mindy* (ABC 1978-1982), *Good Grief!* (FOX 1990-1991) and *Grace Under Fire* (ABC 1995-1998).

Poston won an Emmy Award for his work with Steve Allen in 1959 and received Emmy nominations for roles on *Newhart*, *Mork and Mindy* and *Coach*. He began his acting career in 1947 playing five roles in Jose Ferrer's Broadway production of *Cyrano de Bergerac.* Poston later appeared in such productions as *A Funny Thing Happened on the Way to the Forum*, *Come Blow Your Horn*, *Bye, Bye Birdie*, *Drink to Me Only* and *Fiddler on the Roof.* Some of Poston's movie credits included *Soldier in the Rain* (1963), *Cold Turkey* (1971) and *Princess Diaries II: Royal Engagement* (2004).

CHARLES NELSON REILLY, 76, (5-25-07) actor. Reilly became famous for his work as a wacky game show panelist and his 24 appearances on *The Tonight Show Starring Johnny Carson* (NBC 1970-1982). Wearing his trademark ascot and oversized glasses he was seen on such game shows as *What's My Line?* (1964), *The Match Game P.M.* (Syndicated & network daytime 1975-1983), *Hollywood Squares* (2002). Some of his other television credits included *The Ghost and Mrs. Muir* (NBC 1968-1970, ABC 1970), *Arnie* (CBS 1971-1972), *The Dean Martin Show* (NBC 1971-1974) and *It Pays to Be Ignorant* (1973-1974). To some degree his work on game shows overshadowed his serious work as an actor and director. In 1962, Reilly appeared on Broadway in the original production of *How to Succeed in Business Without Really Trying* for which he won a Tony Award. He was also nominated for his stage work in *Hello Dolly!* In 1997 Reilly received another nomination for directing Julie Harris and Charles Dunning in a revival of *The Gin Game.*

PAUL RHODES, 81, (3-18-07) broadcast journalist. Rhodes anchored the 6 p.m. newscasts on KRNT(TV), now KCCI(TV), in Des Moines from 1955 until his retirement in 1993. With his partner Russ Van Dyke they dominated central Iowa television for a generation. Rhodes began work at KRNT(AM) in 1949 and moved to TV in 1955 when KRNT(TV) signed on the air. Rhodes once recalled "When we went on the air we were doing basically radio newscasts—which were where we came from, radio—and running whatever video we could find, which wasn't a lot at the time. We put Polaroid pictures on the air if there was a late-breaking accident because it took about an hour to get conventional film developed." Besides being an anchor, he was a News Director until he stepped down from the management position in 1990. Over the years he hired and mentored many of the journalists who are still associated with KCCI.

Information for this column was obtained from *The Big Bands* (4th edition), *The Complete Directory of Prime Time Network and Cable TV Shows 1946–Present* (20th edition), *The Encyclopedia of Jazz*, *The Hartford Courant*, *On the Air: The Encyclopedia of Old-Time Radio*, and:

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EDITED BY **RICHARD BREWSTER**, 145 LITTLE PECONIC BAY ROAD, CUTCHOGUE, NY 11935 *PLEASE INCLUDE SASE FOR REPLY.*

Hugo Holden's RCA 621 Restoration

Here's another fantastic TV restoration by Australian Hugo Holden! Last year Hugo provided the "lowdown" on this 621 restoration to the Early Television Foundation for publishing on their excellent website. Earlier examples of Hugo's wonderful restoration work can be seen in our February, 1999 (Andrea KTE-5), May, 1999 (Meissner 10-1153), and February and May 2003 (British HMV 904) issues. His latest work is just as impressive. ETF's Steve McVoy and Hugo himself have given permission to share the writeup with Journal *readers. It has been specially edited for this column. — R.B.*

Hugo pays high compliments to the RCA 621: ". . .I'm awe inspired by the futuristic technology that it employs in 1946. The 621 is a special set, America's first post war mass production set, though made in limited numbers. This set represents the culmination of pre-war television technology and concepts which were distilled by 1938 and 1939, before WW2 disrupted proceedings and diverted the attention of electronic engineers to the war effort."

Hugo began his restoration by removing everything from the chassis, which was then aluminum oxide blasted. Next, he applied an 'Electroless' Nickel-plating of 20 microns as well as a coat of protective lacquer. Check out the beautiful result!

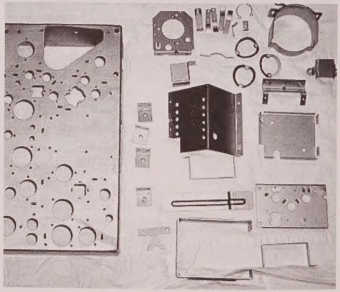
The 60Hz power transformer had to be replaced to allow it to operate on 50Hz Australian power without overheating. A near-perfect size replacement transformer, Hammond 50/60 Hz 300BX, with similar windings, was modified by the addition of the 621 transformer copper flux band and restored covers. A supplementary 6.3volt transformer was added to supply the CRT filament.

The tuner was a major part of the restoration. Hugo points out that its design was quite sophisticated for 1946. He notes that it features a neutralized push-pull 6J6 RF amp, a 6J6 'Kalitron' oscillator and a spectacular mixer coil driven by the combined plate signals from another 6J6. The use of ferromagnetic materials and brass slugs was also unusual for that time.

The tuner sub-chassis was given the same treatment as the main chassis and tube sockets were replaced with NOS units. Bypass and coupling caps were replaced with silver micas.

The high voltage cage was blasted clean and

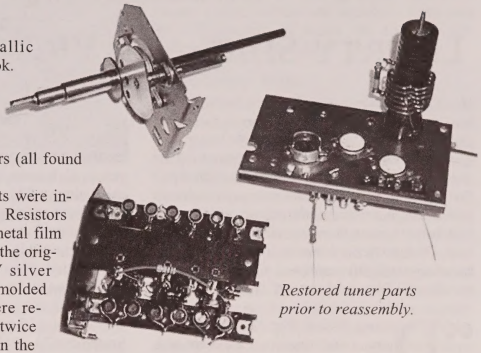
The 621 chassis as Hugo received it.



After complete disassembly, chassis and hardware were aluminum oxide blasted, replated and lacquered.

powder coated with metallic bronze for a near-original look. The flyback was disassembled and the core cleaned. The two-turn 1B3 heater winding was replaced, as were the focus-chain resistors (all found open).

New phenolic tube sockets were installed on the main chassis. Resistors were replaced with 2-watt metal film units, being the same size as the original 1/2-watt types. 500V silver micas replaced the original molded micas. Wax-paper caps were replaced with 'polys' having twice the voltage rating installed in the original casings. (These, as well as most of the other new tubes and parts, were procured from Antique Electronic Supply.)



Restored tuner parts prior to reassembly.

Rusted IF coil spring mounting clips were replaced with NOS ones. Originally it appeared that all pots but the volume/on off were restorable. Hookup wire was replaced with medical grade silicone rubber-covered material that looks exactly like the original. It is easy to use and is very heat resistant.

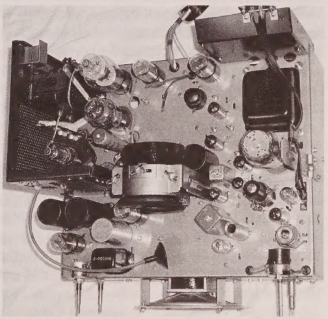
During reassembly, Hugo recommends that the heaviest items be installed last for ease of chassis handling.

Hugo's philosophy of restoration is based on achieving a mint appearance and a perfect working result with no intermittent faults or degraded performance. He did his best to preserve all the potentiometers and not replace any unless absolutely necessary.

However, after powering up the set, it was obvious that the concentric contrast and brightness pots were worn out and intermittent despite being immaculately cleaned up, lubricated and appearing to be 'reasonable' on a meter. The control is a dual-shaft variety and not easy to replace, so he disassembled a dual Clarostat pot, replacing the resistive elements with those of the correct value from other NOS Clarostat pots. Then he machined new shafts to match the geometry of the original RCA unit.

The tuner RF, converter and local oscillator as well as the video and audio IFs were aligned with a sweep generator without any difficulties. The resulting performance is wonderful and the Hammond 300BX power transformer runs as cool as a cucumber.

What's next Hugo?



The restored and reassembled 621 chassis.

With restoration complete, the set looked mint and worked perfectly.

BY GENE GARRISION, K4KSO

LIBERTY SHIPS AND VICTORY SHIPS

Much of the following background and reference material was taken from Internet web narratives and is intended to set the scene for the restoration of an historical shipboard radio receiver from the World War II period. Some readers may have had first-hand naval or merchant marine experiences with the ships and radios described, and know infinitely more about them than discussed in this article. Their service is honored, and their technical knowledge is highly respected. All quoted sources are identified by endnotes. —G.G.

"During World War II, marine radio communications met a severe test. Between 1939 and 1945, the U.S. Maritime Commission built more than five thousand merchant vessels to carry the mountains of material required for the war effort. This massive building program was centered first on the Liberty Ship and then on the more sophisticated Victory Ship. Each vessel carried a radio and at least one radio operator.

American industry, led by RCA's Radiomarine Corporation and by Mackay Radio, produced simple but powerful console-mounted, tube radio systems that were manufactured by the hundreds. The men and women trained to operate these sets used only Morse telegraph code. From saving the lives of torpedoed seamen to seeing that the ship arrived where it was needed, the wartime operators "stuck by their keys" and got the job done."[1]

The Liberty Ships

"When war broke out Europe in September 1939, the merchant fleet was caught unprepared to handle a massive sealift of war material. With continental Europe under German control, and Great Britain under devastating air attack, President Franklin Roosevelt decided to increase the pace of production to provide ships to America's British allies. The result was the emergency fleet program, which introduced the assembly-line production of standardized ships—the Liberty ships—in 1941.

The Liberty ship represented a design solution that would fill the need for an emergency type of simple, standardized cargo steamer. Based on a British design, it could be mass-produced cheaply and quickly using assembly-line methods and could easily be converted to individual military service needs. The United States designated this new type of ship the EC2 (E for emergency, C for cargo and 2 for a medium-sized ship between 400 and 450 feet at the waterline.) Production speed grew more important as German submarines sank ships trying to break Hitler's naval blockade of Great Britain. The Allies needed ships by the hundreds to replace these losses and to increase the flow of supplies to England and, later, the Soviet Union.

The first of these new ships was launched on September 27, 1941. It was named the *SS Patrick Henry* after the American Revolutionary War patriot who had famously declared, "Give me liberty, or give me death." Consequently, all the EC2 type of emergency cargo ships came to be known as Liberty ships. Naming nearly 3,000 ships turned out to be harder than people thought.

Unlike the later Victory ships, there was no plan for how the Liberty ships would be named. In the end, the Liberties were named for people from all walks of life. Ships were named after patriots and heroes of the Revolutionary War. They were named after famous politicians (Abraham Lincoln to Simon Bolivar), scientists (George Washington Carver to Alexander Graham Bell), artists (Gilbert Stuart to Gutzon Borglum who sculpted Mt. Rushmore) and explorers (Daniel Boone to Robert E. Peary). One ship was named the *SS Stage Door Canteen* after the famous U.S.O. club for military service members while another was named the *SS U.S.O.* in honor of the United Service Organization itself.

The Liberty ships were slightly over 441 feet long and 57 feet wide. They used a 2,500 horsepower steam engine to push them through the water at 11 knots (approximately 12.5 miles per hour). The ships had a range of 17,000 miles. Liberty ships had five cargo holds, three forward of the engine room and two aft (in the rear portion of the ship). Each ship could carry 10,800 deadweight tons (the weight of cargo a ship can carry) or 4,380 net tons (the amount of space available for cargo and passengers). The crew quarters were located amidships (the middle portion of the ship).

Many technological advances were made dur-

7187 SILVER BEECH LANE, WARRENTON, VA 20187-7234

The John W. Brown *is one of the two remaining operational Liberty ships, and is maintained as a living museum by Project Liberty Ship (see www.liberty-ship.com). From www.hnsa.org/ships/jbrown.htm. Photo by Joan Burke.*

ing the Liberty shipbuilding program. A steel cold-rolling process was developed to save steel in the making of lightweight cargo booms. Welding techniques also advanced sufficiently to produce the first all-welded ships. Prefabrication was perfected, with complete deckhouses, double-bottom sections, stern-frame assemblies and bow units speeding production of the ships. By 1944, the average time to build a ship was 42 days. In all, 2,751 Liberties were built between 1941 and 1945, making them the largest class of ships built worldwide.

Each Liberty ship carried a crew of between 38 and 62 civilian merchant sailors, and 21 to 40 naval personnel to operate defensive guns and communications equipment. The Merchant Marine served in World War II as a Military Auxiliary. Of the nearly quarter million volunteer merchant mariners who served during World War II, over 9,000 died. Merchant sailors suffered a greater percentage of fatalities (3.9%) than any branch of the armed forces.

The Liberty ship was considered a "five-year vessel" (an expendable, if necessary, material of war) because it was not able to compete with non-emergency vessels in speed, equipment and general serviceability. However, Liberties ended up doing well, plodding the seas for nearly 20 years after the end of World War II. Many Liberties were placed in the reserve fleet and several supported the Korean War. Other Liberties were sold off to shipping companies, where they formed the backbone of postwar merchant fleets, whose commerce generated income to build the new ships of the 1950s and 1960s.

However, age took its toll and by the mid-1960s the Liberties became too expensive to operate and were sold for scrap, their metal recycled. The first Liberty built, the *Patrick Henry*, was sent to the ship breakers (scrap yard) in October 1958, Of the nearly 3,000 Liberty ships built, 200 were lost during World War II to enemy action, weather and accidents. Only two are still operational today, the *SS Jeremiah O'Brien* and the *SS John W. Brown*.

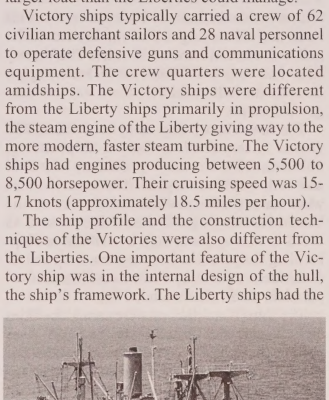
The Victory Ships

In 1943, the U.S. Maritime Commission embarked on a program to design new types of emergency fleet ships, most importantly fast cargo vessels, to replace the slower Liberty ships. The standardized design adopted by the Commission called for a ship 445 feet long by 63 feet wide and made of steel. On April 28, 1943, the new ships were given the name "Victory" and designated the VC2 type (V for Victory type, C for cargo, and 2 for a medium sized ship between 400 and 450 feet long at the waterline).

The Victory ships ultimately were slightly over 455 feet long and 62 feet wide. Like the Liberty ships, each had five cargo holds, three forward and two aft. The Victories could carry 10,850 deadweight tons or 4,555 net tons, a larger load than the Liberties could manage.

Victory ships typically carried a crew of 62 civilian merchant sailors and 28 naval personnel to operate defensive guns and communications equipment. The crew quarters were located amidships. The Victory ships were different from the Liberty ships primarily in propulsion, the steam engine of the Liberty giving way to the more modern, faster steam turbine. The Victory ships had engines producing between 5,500 to 8,500 horsepower. Their cruising speed was 15-17 knots (approximately 18.5 miles per hour).

The ship profile and the construction techniques of the Victories were also different from the Liberties. One important feature of the Victory ship was in the internal design of the hull, the ship's framework. The Liberty ships had the



One of the small number of remaining Victory Ships, the S.S. Lane Victory *is also maintained as a living museum (see www.lanevictory.org). From www.hnsa.org/ships/lanevictory.htm*

Circa 1950s U.S. Navy PR Photo shows a young visitor to the troopship USNS General William O. Darby *(now scrapped)"operatng" an AR-8506-B. As a new 2nd Lieutenant, the author sailed from Brooklyn to Bremerhaven, Germany for his first assignment. The receiver on the left is an RCA AR-8610.*[5]

frames inside the hull set 30 inches apart. This made the hull very rigid. This rigidity caused the hull to fracture in some of the ships. The Victory ships had their hull frames set 36 inches apart. Because the hull could flex, there was less danger of fracture.

The first Victory ship completed was the *SS United Victory* (built at Oregon Shipbuilding, Portland, OR), launched on January 12, 1944 and delivered February 28. The next 33 ships were named after member countries of the United Nations (e.g., *SS Brazil Victory* and *SS U.S.S.R. Victory* [both built by California Shipbuilding Corporation, Los Angeles, CA], and *SS Haiti Victory* [built by Permanente Metals Corporation, yard 1, Richmond, CA]).

The ships that followed were named for cities and towns in the United States (e.g., *SS Ames Victory* [built by Oregon Shipbuilding], *SS Las Vegas Victory* [built by Permanente Metals Corporation, yard 1] and *SS Zanesville Victory* [built by Bethlehem-Fairfield Shipyards, Inc., Baltimore, MD]) and for American colleges and universities (e.g., *SS Adelphi Victory* and *SS Yale Victory* [both built by Permanente Metals Corporation, yard 2]).

All of the ships' names ended with the suffix "Victory" with the exception of the 117 Victory Attack Transports that were named after state counties. The Maritime Commission built 414 Victory cargo ships and 117 Victory attack transports for a total of 531 vessels during the course of the war.

Victory ships formed a critical maritime link to the theaters of war. These fast, large capacity carriers served honorably in both the Atlantic and Pacific theaters of war. Ninety-seven of the Victories were fitted out as troop carriers; the others carried food, fuel, ammunition, material and supplies. At the war's end a number of Victory ships were offered for sale by the Maritime Commission. One hundred and seventy were sold, 20 were loaned to the U.S. Army and the rest were stored as part of the reserve fleet.

When the Navy no longer needs to use a ship but wishes to reserve it for a future emergency, it tows the ship to a storage harbor, empties it of all fuel and cargo, and seals its windows and doors. The ship is protected from salt-water corrosion by a cathodic protection system and the interior spaces are dehumidified. This technique is called "mothballing," because it echoes how people preserve a wool sweater that is put away for the summer.

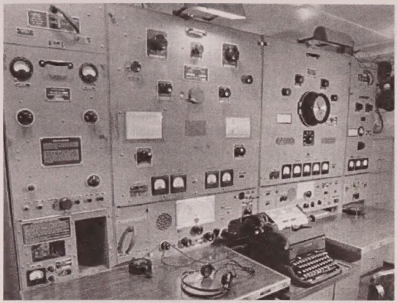
Some vessels were reactivated to serve during times of national crisis, including the Korean War, the Suez Canal closure of 1956 and the Vietnam War. Other vessels were retained as logistic support ships as part of the Military Sealift Command, which in 1970 became the single managing agency for the Department of Defense's ocean transportation needs. The command assumed responsibility for providing sealift and ocean transportation for all military services as well as for other government agencies.

In 1959, eight Victory ships were reclassified and refitted as instrumentation, telemetry, and recovery ships for the National Aeronautics and Space Administration (NASA) in support of America's space program. On August 11, 1960, the former *SS Haiti Victory* (renamed the *USNS Haiti Victory* (T-AK-238)) recovered the nose cone of the satellite Discoverer XIII, the first man-made object recovered from space.

Over the years, many ships in the reserve fleet have been sold for scrap, their metal to be recycled. Of the thousands of Liberty ships and Victory ships produced only a small number remain."[2]

The Radio Equipment

"Originally, Liberty ships only had medium frequency (MF) radio equipment. MF was considered as 500 kHz and down. The integrated modular unit was designated as an RMCA-3U or an equivalent made by Mackay Radio. The 3U had three frames: the left one contained the Auto Alarm, the center unit housed the MF AR-8510 receiver and the main ET-8024A MF transmitter. The right frame contained the AR-8025 emergency MF transmitter along with various

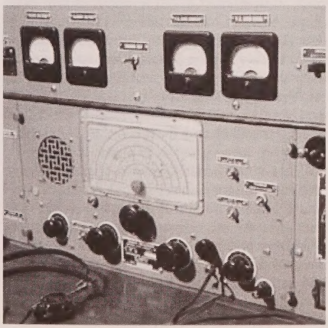


The restored Radiomarine 4U radio console on display at the San Francisco Maritime Radio Historical Museum.

switches for controlling the battery chargers.

Later, perhaps in 1944 or 1945, HF rigs were added to Liberty ships. These were implemented by a fourth frame that was installed at right angles to the 3U, between the Radio Room door on the starboard side of the Radio Room and the 3U. The added frame contained an HF receiver (the AR-8506), the 8023 HF transmitter, and a transfer switch that was used to switch the motor generator (in the base of the 3U) between the MF and HF main transmitters. Technically, this added HF frame was not part of the RMCA-3U.

In contrast to the Liberty ships, Victory ships were always outfitted with integrated MF and HF equipment. Essentially, a fourth frame was added between the Auto Alarm frame and the MF frame and the integrated modular system was designated as an RMCA-4U. Again, Mackay made a similar unit. If one looks closely, the left frames of the 3U and 4U are the same, the second frame of the 4U is the same as the "outboard" Liberty Ship HF frame and the two rightmost frames of the 4U are the same as the two rightmost 3U frames. Thus, the 4U had the same components as the augmented 3U but arranged in one, flat, row. (The description above is attributed to Saul B. Yochelson of the *Lane Victory* radio department.)[3]



A closeup of the AR-8506-B in the 4U console.

The RCA Radiomarine Corporation developed a 4U (4 units) radio system, about 1940. The system included four independent receivers and three transmitters, all mounted in a single console. One of the receivers included was an AR-8506-B. The San Francisco Maritime Museum has an exhibit honoring maritime radio operators, including a restored Radiomarine 4U radio console from a World War II Victory ship. The story of the restoration of the 4U Radio Console, completed by the Maritime Radio Historical Society, can be seen on line. [4]

The companion story to this article (see "The Communication Receiver") discusses my restoration of an AR-8506-B.

Sources

1 Radio on Victory Ships, Merchant Marine Communication, Maritime Museum, San Francisco Maritime National Historical Park, www.nps.gov/archive/safr/spark/203a.html. March, 2000.

2 Liberty Ships and Victory Ships, America's Lifeline in War. Teaching With Historic Places Lesson Plans, National Park Service & National Register of Historic Places, www.cr.nps.gov/nr/twhp/wwwlps/lessons/116liberty_victory_ships/116facts1.htm.

3 *SS John Brown* Radio Room, Homepage of Jerry Proc, VE3FAB, www.jproc.ca./ve3fab-jbradrm.html. April 6, 2007.

4 The 4U Radio Console, Maritime Radio Historical Society, www.radiomarine.org/4U-proj.html.

5 Online Library of Selected Images; U.S. Navy Ships. Photo #NH 104184, Department of the Navy, Naval Historical Center, Washington, DC. www.history.navy.mil/photos/images/i04184.jpg.

BY ALLAN PELLNAT, KX2H

THE VOYAGE OF THE SETH PARKER

While skimming through old *QST* magazines in the Bruce Kelly Memorial Library I came across the following under the Roanoke Division news for April 1934: "W4BRK was *not* allowed to inspect radio equipment on the schooner Seth Parker while docked in Wilmington harbor. R.I. states that he has not had a single report of off frequency from North Carolina this year." Note the italicized not.

This intrigued me—first because W4BRK, the Radio Inspector (R.I.), was Sam Sweeney, who was a local ham and also Secretary of the Cape Fear Amateur Radio Association in that year. Secondly, I had been looking for links between the early local hams and various commercial radio enterprises.

I did a simple Google search for "Seth Parker" to see if I could discover something about the person the ship had been named for. It turned out that Seth Parker was not a real person, but a fictional elderly New England parson on a weekly NBC radio show! His creator and radio voice was 32-year-old Phillips H. Lord, who went on to create the golden age radio classics *Gangbusters* and *Mr. District Attorney*— the antecedents of today's *America's Most Wanted* and *Law and Order* TV series.

It seems that Mr. Lord, having made a tidy fortune writing radio scripts, had purchased the four masted lumber schooner *Georgette* and converted it into a private yacht. The conversion included new diesel engines, the latest in food refrigeration and comfortably air conditioned cabins provided by his radio sponsor Frigidaire, and a one kilowatt AM shortwave broadcast transmitter licensed as an NBC affiliate with the call sign KNRA.

Lord's plan was to sail *Seth Parker* around the world with various celebrity guests coming and going throughout the voyage. He would continue his weekly radio broadcasts by short wave from exotic places and NBC would pick them up for rebroadcast over their network. Each broadcast began with the words "Frigidaire Presents the

A rendering of the Seth Parker, and of Phillips H. Lord—both as himself and as his Seth Parker character. It's signed "Drawing by Edward A. Wilson for Frigidaire." (From John Woram's website)

Cruise of the Seth Parker."

John Woram has a website article titled "Chronology of the Seth Parker Voyage." It showed the voyage as beginning in December, 1933 at Bridgeport, CT. The ship then proceeded down the East Coast, reaching Washington, DC in late January. When I first saw the chronology, there was a gap after that until an undated visit to Charleston, SC and an arrival at Jacksonville, FL on March 6th, 1934. From the April *QST* mention and Mr. Woram's chronology, I knew that the *Seth Parker* was likely to have been in Wilmington between late January and early March of 1934.

My next stop was the newspaper archives in the local history room of the New Hanover County public library. Wilmington, NC then, as now, was an active ocean seaport. In the thirties, ships arriving and departing were regularly listed on the business pages of the newspaper. I found the listing I was looking for on February 12th,

204 LOVE GRASS CT., WILMINGTON, NC

when the ship was shown as arriving from Norfolk, VA. February 16th showed the *Seth Parker* departing for Charleston, SC.

Next came a page-by-page scan of the newspapers for that five day period to see if there was any mention of the radio celebrity's visit. I found two items. One of them, shown with this article, described Lord's arrival and his plans to host a group of crippled children during his broadcast the following evening.

The "electric manufacturing firm" described in the clipping was, of course, Frigidaire. With the Salk vaccine being some 20 years in the future, we can surmise that the "cripples" referred to might well have been polio patients.

Of interest, also, is the fact that at this point in time Wilmington did not have an NBC affiliated broadcast station. WRAM had gone off the air in late 1933 and WMFD didn't come on the air until April 1935. The Cape Fear Amateur Radio Association had leased the former WRAM transmitter site for its club station, W4CUA, in March 1934 and operated there up through 1936.

A second news article, on the day of departure, described the broadcast and the *Seth Parker's* departure from her berth at the custom house dock—being towed to the mouth of the Cape Fear River by a tug.

All of this interesting information was based on a chance discovery in a 1934 *QST* of W4BRK's familiar call sign. I already knew, from earlier research, that Sam Sweeney was one of Wilmington's early hams. Now I know that he was also the Wilmington Radio Inspector in 1934. I also uncovered the fascinating story of the *Seth Parker*, an otherwise obscure piece of NBC network history, and its brief appearance on the local broadcasting scene.

SETH PARKER HERE; MEETS CRIPPLES

Famous Radio Entertainer To Broadcast From Schooner Tuesday Night

Cripple children of the community are looking forward to Tuesday night when they will take over the schooner Seth Parker during the weekly broadcast of Captain Phillips Lord, otherwise known as Seth Parker.

Captain Lord arrived in Wilmington yesterday morning and met with a few crippled children at the city hall yesterday afternoon. He is having some difficulty finding a sufficient number of cripples for the program he is planning to put on.

The schooner was reported off the bar at the mouth of the river last night and it is thought it will come up the river some time today. Captain Lord came here by train and will join his ship after it docks.

Tomorrow night he will put on his weekly program which will be broadcast over a national hookup in the interest of an electric manufacturing firm. The schooner came here from Newport News, Va., and encountered quite a bit of rough weather off Cape Hatteras. From here it will go to Charleston, S .C., and Savannah, Georgia.

Clipping announcing the Wilmington arrival of the Seth Parker *and plans for the upcoming radio show. From* The Wilmington Morning Star, *February 12, 1934.*

I was able to provide John Woram with copies of the newspaper articles documenting two previously unknown ports of call for the *Seth Parker*: Wilmington, NC and Savannah, GA. He has since added this information to his website chronology. From his website I also learned that Frigidaire had published a promotional booklet titled "Aboard the Seth Parker," and was able to find a copy of it for sale on the internet. That booklet is now archived in the Bruce Kelly Memorial Library in Bloomfield, NY.

When I lived in Rochester, NY near our wonderful AWA Electronic Communication Museum, I documented more than thirty-four early radio businesses, and the local hams involved with them, in an *AWA Review* article titled "Made in Rochester." After moving to my present home in Wilmington, NC I set about researching the local history in the same way. The story described above is just one of many fascinating linkages that I have uncovered while doing these local histories, though I still haven't found out why W4BRK was *not* allowed to inspect the KNRA equipment.

I encourage all AWA members to begin to document the history of radio and the involvement of amateurs in their own home towns. Urge your local ham club to appoint a club historian if they don't already have one. Volunteer to be that club historian. Collect and archive your club's newsletters, meeting minutes and membership lists. Seek out the OTs who have been club members for the longest time. Document their oral histories of amateur and commercial radio development in your area. Contribute your documentation to the Bruce Kelly Memorial Library in Bloomfield, NY and to the local history department of your local public library.

NEW BOOKS AND LITERATURE

DAVID W. KRAEUTER, 506 E. WHEELING ST., WASHINGTON PA 15301. E-MAIL: kraeuter@earthlink.net.
PLEASE INCLUDE SASE FOR REPLY.

Books to be reviewed in this column should be sent directly to David Kraeuter at the address above. After review, all such books become a permanent part of The AWA Library, which is part of The AWA Electronic Communication Museum and is available to members for browsing and research.

Carl & Jerry: Their Complete Adventures from *Popular Electronics*

By John T. Frye, W9EGV. Edited by Jeff Duntemann, K7JPD. Published 2007 by Copperwood Press. Available at www.lulu.com, *6 x 9 inches, about 190 pages per volume, softcover, $15.95 each. Five volume set. Vols. 1-3 published; 4-5 in press.*

Yeah, you're gonna like these, all right. Even in the unlikely event that you've never read any of the adventures of Carl and Jerry, you'll still enjoy reading these stories of two teenage boys, each gaga over electronics, learning the ins and outs of the hobby by the seat of their pants in small town America at mid-20th century. These 119 stories originally appeared in *Popular Electronics* between 1954 and 1964.

Seen from the sophisticated electronic perspective of the 21st century, these short stories may strike the reader as somewhat pedestrian. And some of the stories stretch the limits for short fiction. "Benefits of Amateur Radio," for example, is essentially a list of benefits very thinly disguised as a short story.

Frye knew he was onto a good thing, and repeats some techniques and descriptions. How many ways can he describe Jerry as fat, without actually using the word? And how many times must we be told that Carl wears horn-rim glasses? So the writing is formulaic, of course, but who cares? It's fun to see what entertained us and taught us half a century ago.

With the editing of this five-volume series now under Duntemann's belt, it should be a relatively easy matter for him to collate and print Frye's "Mac's Service Shop" series next. We're waiting.

A word of warning–you've heard about the kid set loose in a candy shop? The first two pieces were great, the next two were merely okay. Surprisingly the fifth wasn't too good, and after that… Carl and Jerry comin' atcha once a month made us look forward to each episode, but it would not be wise to read these books straight through at once. A workable compromise might be to read one story a day for each of the next 119 days.

Website: *www.lulu.com*

Everyone, it's been said, has a book in him or her just waiting to be written. If that's true, then the AWA membership collectively represents a radio history library of several thousand volumes, since each AWA member has had unique experience with radio.

So where's your book? And don't say you haven't written it because you know how difficult it is to find–and please—a publisher. That onerous burden has been eliminated for all would-be authors by Lulu, the free on-line publisher. Simply put—you write it, they'll publish it. And they'll pay royalties. In fact, you the author determine the royalty amount. (Slight pause here while AWA members rush to their word processors).

As soon as you finish your book (considerably longer pause while AWA members finish their books) all you have to do is log on to the Internet and send Lulu an electronic copy of the book. They'll want to know certain particulars, such as page size, hardcover or soft, etc. They'd like to receive your book in Portable Document Format, a.k.a. PDF. Those of you who wrote your books using WordPerfect X3—no problem. Just click on "File," then "Publish To," then "PDF." Or you can ask Lulu to convert the file for you.

Lulu strongly suggests that at first you order only a single copy of your book, for proofreading purposes. That's because it's easier to see errors in paper copies than in on-screen copies. After you proof your paper copy, make any corrections necessary to your file, send it back to Lulu, and then sit back and let the royalties roll in. Don't need the royalties? You can specify that and Lulu will then sell your book for printing costs only. A 60-page paperback book with 8½×11" pages, including photographs, etc. will sell for less than $6 per copy. Not feeling quite so magnanimous? Set your per-copy royalty at whatever suits you. But be warned—if you set it at $100 per copy, sales might atrophy.

Tempus fugit. Still, if you send Lulu your file today, I just might be able to review your book in the next issue of this column.

Mouser Electronics. February-April 2007 Catalog 629. "The Newest Products For Your Newest Designs." www. mouser.com.

I suppose one could review this electronic parts supplier's catalog as a book, but I want to review it as a human artifact. Looked at like that it's a pretty amazing one. This dense object weighs in at three pounds, eight ounces. There are 1,840 Bible-thin-pages of specifications for electronic parts, each page containing dozens or hundreds of facts, including illustrations. We elderly-or-nearly-so appreciate the use of a magnifying glass in viewing them. Look, for example, at the BOMAR Between Series Adapters on page 953—there are 45 postage-stamp-size line drawings of connectors, each ever so slightly different from the next. The back of an earlier catalog boasts "Nearly Every Connector Under the Sun" and it would be hard to dispute this claim (but I still can't find a male TNC to female adapter for the VHF whip antenna on my Drake R8B).

Who made up this artifact, and what kind of computer and program did they use to produce it? I'd like to meet the catalog production staff at Mouser just to verify that they are real people. And I'd like to ask them a few questions, like do they relax in a rock band after work and, if so, are they available for church potluck suppers on Wednesday evenings? Are the people who proofread the catalog still sane when they get to page 1,839? Who has to take the catalogs to the post office?

Anyhow, I decided to put Mouser to the test. Using Catalog 629 I found the Mouser stock number for some batteries and other minor parts I needed and logged on to their Internet site. I typed in the part numbers and was quickly taken to a description of the parts. My order was completed rapidly and when the box arrived on my front porch a few days later it contained exactly the parts I had ordered. That fact alone was impressive.

Mouser is also to be commended in this marketing day and age for still having no minimum order requirement, and that policy should be the delight of every bored and near-broke schoolboy who wants to beef up the bass on his boombox, build a better bomb, or just buy a binding post. So one could, I suppose, buy a single (bulk packaging) ¼-watt one-ohm resistor for 5¢ (plus postage). If you want to simultaneously cut unit costs and stock up, order 25,000 of them (tape and reel packaging) and you'll get the unit price down to just half a penny (plus postage).

Don't look in the catalog for 01As, or even 35W4s. There are no tubes to be had. But if you need a standard 1N914 switching diode in a DO-35 package, you can get one for 6¢. A diode for 6¢—what would Edison or Fleming have thought?

Legacies of Edwin Howard Armstrong

Edited by John W. Morrisey. Published November 1990 as Proceedings of the Radio Club of America, *volume 64, number 3. Second edition published in book form in 1991. Available from the Club at 732-842-5070 or at* www.radio-club-of-america.org, *8½ x 11 inches, 321 pages, softcover, $25.00.*

The great value of this book is that it reprints 14 papers, most of them technical, written by Armstrong himself. His 1915 paper minutely detailing the audion's behavior is here, as is his scathing 1948 dissection of Stuart Seeley's ratio detector. Some of these reprints are of papers Armstrong presented before the Radio Club of America. Copies of their *Proceedings* are rare; even the great Linda Hall technology library in Kansas City, Missouri lacks them before 1950. Altogether the reprints included here represent a good chunk of the 26 papers by Armstrong listed in the book as a reprint of the bibliography that originally appeared in Lawrence Lessing's *Man of High Fidelity*.

Legacies, and Armstrong's reprinted papers, are organized according to his major inventions–the regen, superhet, and super-regen circuits, and, of course, wideband FM. Each of these sections reprints at least three of Armstrong's papers, except for the super-regen section, which contains only one reprint.

A disappointment of the book is the poor reproduction of photographs from some of Armstrong's original articles. These are in some instances so small and/or so poorly presented as to be useless.

Also included are appreciations of Armstrong by many who knew him personally or studied his work. It would have been easy for their contributions to dissolve into hagiography, but a balance is provided by the translation of Lucien Levy's plea to be remembered for his own superhet work, and the inclusion of William Denk's "Two Rich Minds–One Poor Invention," an analysis of Armstrong's and Michael Pupin's U.S. patent 1,336,378.

The book closes with no fewer than 19 appendixes. One of these is a list of Armstrong's U.S. patents. The list unfortunately omits 17 patents, probably due to an editing or printing error. A correction to the list is being published in a book, *Ten Patents from Radio History,* currently in press.

♦ ♦ ♦ ♦

Note: an incorrect telephone number was given in the July 2007 issue for Sonoran Publishing, publishers of Eric Wenaas' *Radiola: the Golden Age of RCA*. Their correct number is 1-800-228-3816.

EDITED BY **JOHN CASALE**, W2NI, 35 PICKERING LANE, TROY, NY 12180, casalejj@yahoo.com
PLEASE INCLUDE SASE FOR REPLY. © 2005, J. CASALE

Baseball and the Telegraph

Part 1: Building a National Interest

Early this summer I visited Yankee Stadium and watched a game between the New York Yankees and the Los Angeles Angels. I could not help but notice the press box, radio and TV booths overlooking the field. In the press box there were rows of reporters and sports writers each sitting in front of a lap-top computer. It made me think about how the press boxes used to look during the telegraph era, the role the baseball telegrapher had played in telegraphing press reports and the live play-by play action from the field. It is also important to remember the supporting role they had, along with the press, in building an interest in the game itself.

The telegrapher's dominant role throughout baseball's early history was to communicate all the news from the field so that it could be relayed throughout the country. But he was also responsible for telegraphing the live play-by-play action.

During a World Series, the audience was sometimes world-wide. The telegrapher's role in this regard was really quite remarkable and rarely mentioned. His live transmissions were typically copied by telegraphers located in newspaper offices, club rooms, theaters, hotels and wherever bulletin projection machines and scoreboards were located.

The scoreboards alone ranged from elaborate electric ones located in the heart of large cities and attracting crowds in the thousands, to simple chalk-board types set up at small telegraph offices in rural communities. The transmissions were also copied and re-transmitted via ticker tape networks to thousands of machines nationwide. Sometimes the general public knew what happened after a play faster than the fans in the stands did. Later, the telegraph's live play-by-play capability was used for the re-creation of baseball games over radio.

During the early years of baseball, ballparks were modest in size and had relatively small crowds. Few fans had the time to attend games and a large percentage of the games were obviously played away. The interest in the home team grew mainly because of the newspaper reports that were filed by the press reporter and sports writer via the telegraph. Credit for increasing and maintaining fan interest in a local team goes to this early newspaper coverage.

Telegraphers covering the 1912 World Series at the Polo Grounds in New York (Library of Congress, Prints & Photographs Division).

At first, newspapers were only allocating a few inches of space for baseball news. However, by the time the larger ballparks were being built in the early 20th century, most cities with a team in the major leagues had at least one newspaper with a sports section. Baseball team owners quickly realized the important role newspapers and their reporters played in generating interest in their teams and players. Thus, an important alliance grew between the teams and the reporters assigned to cover them.

Another important alliance developed be-

tween a reporter and his telegrapher. For many newspapers, a reporter was assigned to a Western Union telegrapher at the field. World Series tickets were frequently issued in pairs—one for the reporter and one for his telegrapher. Western Union selected telegraphers not only for their proficiency but for their knowledge of baseball.

The wire services such as the Associated Press and some of the larger newspapers had their own telegraphers, or reporters who were also qualified as telegraphers. The technical backbone to deliver all this baseball news was Western Union's telegraph network that included a number of lines strung directly to the field from a large downtown central office.

Each year, the amount of baseball press material that was transmitted via telegraph increased, especially during a World Series. During the 1911 World Series between the New York Giants and the Philadelphia Athletics, Western Union transmitted 1,250,000 words of press material, far exceeding even what was sent during presidential conventions.

A close-up view of some of the telegraph instruments being used (see text for descriptions).

For the 1929 World Series, between Philadelphia and the Chicago Cubs, the volume averaged 1,000,000 words for each game played at Philadelphia's Shibe Park alone. This total does not include the special feature stories and syndicated columns that were filed later by writers directly at Western Union offices.

At all the new or remodeled ballparks in the early 20th century, Western Union made arrangements for telegraph capability. At Boston's new Fenway Park in 1912 for example, Western Union installed a switchboard for 16 circuits in the press box. This included circuits for the AP, local downtown newspapers, foreign service and provisions for direct wires to the home cities of visiting teams.

Later that year, when the Red Sox made it to the World Series against the New York Giants, the physical size of Fenway's press box had to be increased to five times its normal capacity to accommodate representatives from 269 newspapers. Western Union increased the number of their lines to fifty in order to connect Fenway to newspaper offices in many other cities. They also installed fifty lines at the Polo Grounds in New York.

Additional Western Union telegraphers were assigned to both fields to handle the increased volume of press reports. Some of them had to work well into the night to meet newspaper deadlines, reading their copy by candle-light. The press boxes at the Polo Grounds and at many other parks at this time were located down at the field level and unprotected from the weather.

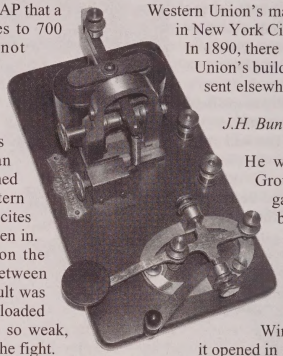
Of the six instruments visible in the close-up view of the telegraphers at the Polo Grounds for the 1912 World Series, five are "MCM" sets manufactured by J.H. Bunnell & Co. Introduced in 1900, this "K.O.B." set included a "Ghegan sounder" with a steel-lever *key on* the same *base*. This set was noted for its fine adjustments, portability and ability to work on a long main line without requiring a local battery. The set seen at the very end of the row is a Barclay Box Relay also known for the same capabilities.

It is not surprising, since fast, effortless sending could be so important, that two of the telegraphers are using a Martin Vibroplex. In the foreground is a double-lever model and in the background a single-lever ("original") model. Both are connected to the key on the telegrapher's "MCM" set by a cord and wedge inserted into the key's circuit closing switch.

The first live play-by-play reports telegraphed on a large scale were done by the Associated Press. They were transmitted during the 1916 World Series between the Boston Red Sox and the Brooklyn Robins (later called the Dodgers). The Associated Press had its own telegraph network consisting of lines leased from Western Union. The lines were regional in length with many relay points.

The AP gave World Series news precedence over all other news. Kent Cooper, the chief of AP's traffic department, wanted to put W.U. to the test by connecting every AP telegraph circuit in the country to a single telegraph key at both Ebbets Field in Brooklyn and Braves Field in Boston. (The new Braves Field could handle larger crowds than Fenway at that time.) Nothing had been tried like this before for either news or commercial transmission.

Western Union warned the AP that a single circuit of 26,000 miles to 700 newspaper offices would not work. They reminded them of a similar attempt that was made for the Johnson-Jeffries fight of 1910 in Reno, Nevada. There, ringside was connected to the Denver-San Francisco wire, and as it turned out, every railroad and Western Union office between the two cites tried to cut into the line to listen in. Telegraphers did the same on the Eastern section of the line between Denver and Chicago. The result was that the circuit was so heavily loaded down, and line currents were so weak, that no one received much of the fight.



J.H. Bunnell & Co. "MCM set."

To prevent this from happening in the 1916 World Series, the AP ordered Western Union to cut-out all railroad and WU offices, allowing no possible connections to this circuit except at AP offices and selected newspapers. This plan proved successful and every AP office in the country was able to copy the live play-by play from both fields.

The success of these transmissions captured the attention of Thomas A. Edison who sent the following congratulatory telegram to Kent Cooper: *"The Associated Press must be wonderfully well organized to be able to accomplish what was done in the ball games. Uncle Sam has now a real arterial system and it is never going to harden."* EDISON.

One baseball telegrapher who deserves special focus is Edson S. Brewster. For forty-nine years, he handled more baseball games than any other telegrapher, including games in 33 World Series. Brewster was a master telegrapher for Western Union's Commercial News Department in New York. He originated the play-by-play reports at all the games in New York City's Polo Grounds and Yankee Stadium, as well as all the World Series games played anywhere from 1905-1938.

Needless to say, during his later World Series games eager fans around the globe, estimated in the millions, awaited the play-by-play reports sent from Brewster's sole telegraph key.

Edson Brewster was born in Otisville, N.Y. in 1866. He had played semi-pro baseball in Middletown, N.Y. for a team called the Asylums. Future Hall of Fame pitcher Jack Chesbro was one of his teammates. Brewster was also working as a telegrapher in country offices along the Erie Railroad until 1889, when he was sent to Western Union's main office at 195 Broadway in New York City.

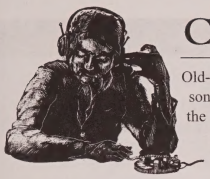
In 1890, there was a major fire at Western Union's building and Brewster had to be sent elsewhere in order to fill his time. He was sent out to the Polo Grounds to telegraph baseball game reports. Using his baseball background, he was so successful that he found himself with a permanent assignment. He was also assigned to the Commercial News Department Wire at Yankee Stadium when it opened in 1923.

According to Western Union officials, Brewster was selected for the extremely difficult position as a play-by-play telegrapher for three qualities he possessed. "First, an absolute mastery over his instrument. Second, an absolute mastery of the game, and third an absolute mastery over himself." He had a level head with no personal prejudices or desire to see one side or the other win.

In 1924, Brewster said the following about the responsibilities of his job: *"The average sporting reporter has little trouble even with a big event like the World Series. He sees the game, takes a few notes on the margin of his scorecard, and then goes back...and writes the story."*

"My job is more trying. I am seated in front of my instrument and must give out the play as it occurs. Fifty millions are waiting for that play, and they want it at once. Further they want it right. I cannot make a mistake. It's impossible to send out a correction after I have said (Babe) Ruth tripled to right. Half a thousand scoreboards all over the world have put Ruth on third; they cannot change it..."

In Part Two of this story "Every pitch, every move on the field," I will cover more about Brewster, electric scoreboards and the role the telegraph played with radio re-creations.



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Old-time ads are free to members collecting and restoring equipment for personal use. *The AWA Journal* classified ads are also available for browsing in the "*AWA Journal On Line Edition*" on our Internet Web site (www.antiquewireless.org). Please observe the following: (1) include as SASE if acknowledgement is desired; (2) material must be more than 25 years old and related to electronic communications; (3) give your full name, address and zip code; (4) repeats require another notice (we are not organized to repeat automatically); (5) the AWA is not responsible for any transaction; (6) we retain the right to reduce an ad's size if over seven lines; (7) AWA does not accept commercial advertising in this column; and (8) closing date is six weeks prior to first day of month of issue. Ads received after that time will be held for the following issue. Mail all ads to: RICHARD RANSLEY, P.O. BOX 41, SODUS, NY 14551 or email to richardransley@mac.com.

In order to give members wider distribution for their ads, our classified section has been made available for all to read on the AWA Web site (www.antiquewireless.org). And in order to increase the number and variety of the ads in the section, we also now offer free postings to non members. But with this more public exposure of our classified section inevitably comes some increased danger of contact with dishonest buyers and sellers. Be careful! In a very common fraud, a prospective buyer will offer to send the seller a check for a generous amount of money and to arrange for packing and shipping the item. The seller is to pay the packer/shipper, deduct his own fee, and return the balance of the money to the buyer. Don't allow your item to leave your hands until you are certain the check will clear!

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Large vacuum tube Magnavox, about 1940. Includes AM/Shortwave unit, FM unit, power output unit and 3 speed auto record changer/ player with 45 record adapter, complete, cabinet good, was operable 25 years ago, idle since. $50. or trade for 1930 AK 55C floor model in comparable condition. Al Groer, 1412 Trimble Rd., Boothwyn, PA 19061-1810 (610) 485-3097.

Zenith Trans-Oceanics 7G605-R-7000 from excellent to restorable condition. Call for specifics. Ted Demski, 5806-225 Pl. SW, Mountlake Terrace, WA 98043 (425) 778-7100 or (425) 220-5261.

Have rare 1930s McMurdo Silver Masterpiece V radio in a console cabinet. Interested in trading for a late 1950s or 1960s Dodge WM300 Power Wagon pickup truck in good original condition. McMurdo Silver offered a custom radio which included an advanced 20+ tube circuit, chrome plated receiver and amplifier chassis, 18 inch Jensen theater speaker and choice of cabinet. Was purchased and rebuilt years ago. Tony Peterson, 10291 Mississippi Blvd., Coon Rapids, MN 55433 (763) 422-8889.

Ingelen Genius 650. This is a large table radio designed by Ludwig Neumann, circa 1949, and made in Austria. Am selling it for the original owner, who cannot take it to a smaller apartment. Is in good wortking order with new filter caps and new tuning eye. Has four small chips in the veneer on the right side near the tuning knob, otherwise the cabinet and its original finish are in nearly showroom condition. It tunes LW, MW (AM) and SW from 3.6 to 22 MHz. Includes original owner's manual and repro schematic. Asking $600 plus shipping/insurance. Pictures e-mailed upon request. Paul Litwinovich, 205 White Plains Rd., Trumbull, CT 06611 paull@wshu.org (203) 257-5587.

SELL/TRADE—COMMUNICATIONS GEAR

National SW-5, 2.5v tubes, 7 MHz range coils, HB power supply. Very old. Richard Bauer, 563 Hambrick Rd., Dallas, TX 75218 (214) 348-3378 k5rb@tx.rr.com

Complete Collins radio station from microphone to antenna; includes 75A4, 32S3, 30L1, B&W VS1500A antenna tuner and three element 20M Yagi (never put up), $2500. Pickup only. Lou Agresti, W2OPF, 213 Bartlett Ave., Liverpool, NY 13088.

SELL/TRADE—GENERAL

Textronix 2232 100 Mc Digital Storage Scope,

(continued on page 65)

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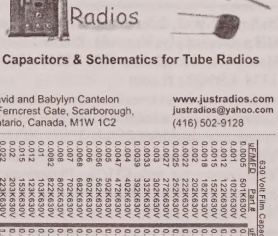

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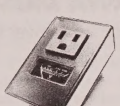

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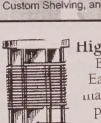

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CLASSIFIED, *continued from page 65*

dual trace, needs repair, $200.; Fluke 8050A Digital Multimeter, working, needs batteries, $25.; Sony R-R TC 352D Mikes and manual, working, $75.; Challenger CH30 P.A. mikes and speakers, working, $40.; Newcomb E104, 2 Turner mikes, working, $40. All prices plus shipping. Robert Rossi, 10936 Melbourne, Allen Park, MI 48101 (313) 386 8321 Speakers with cabinets: Peerless Reproducer, Newcome Hawley, Brandes, RCA 100A. John Zima, 1360 Reed Road, Churchville, NY 14428, jfz_rhy@yahoo. com

SELL/TRADE—LITERATURE

Complete set of Riders Vol.1 thru 18 beautifully recovered in black and silver lettering. Looks great on shelf, photos available, $90 plus freight. Paul Thompson, 340 Old Mill Rd., Santa Barbara, CA 93110 (805) 692-1941.

SELL/TRADE—TUBES & TRANSISTORS

Thinning out my tube collection. Will be sending out lists periodically. To get lists please phone or mail your e-mail address. Charles Kirsten, 7626 Cloudy Bay Court, Rancho Cucamonga, CA 91737 (909) 803-2447.

WANTED—GENERAL

Need a good tuning cap plus 1 owner's manual and schematic (or copies) for a Sharp/Suntone transistor radio Model TR202. Thanks! Larry Lamia, 2610 Ouachita Circle, Mena, AR 71953 (479) 394-3509.

WANTED—LITERATURE

Looking for *OTB* Military Equipment Special (November 1989, Vol. 30, No. 3). Richard Burke, KA1ZQR, 348 N. Main St., Stonington, CT 06378.

WANTED—TEST GEAR

Still doggedly trying to find a Sterling Tube Checker, Model R-517. This little recluse is a black wrinkled instrument with one single 50 ma. meter, several knobs and switches, 2 four pin, and 2 five pin sockets on the front. Will buy in any condition, parts or information. Help! Charles Kirsten, 7626 Cloudy Bay Court, Rancho Cucamonga, CA 91739 (909) 803-2447.

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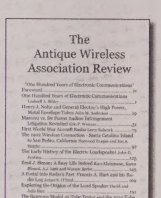
AWA REVIEW VOLUME 20


The Antique Wireless Association Review

This year's *Review* contains 230 pages—60 more than volume 19. The ten articles include some directly related to the conference theme of "100 years of electronic communication." We are pleased to bring you this volume of outstanding articles by some of the finest writers on the history of wireless today.

• We invited noted AWA tube expert **Ludwell Sibley** to write on the conference theme. His account of "one hundred years of electronic communication" focuses on the telephone industry and its use of amplification for long distance connections, which he describes as the "killer application." Through this and other major applications, Lud describes the major achievements of the century. And yes, he includes the implications for wireless technology.

• **Eric Wenaas**, also closely linking to this year's theme, describes in detail the Marconi vs. de Forest Audion infringement litigation. In explanations not seen before in detail, he explores the demonstrations that were used in court to support the various arguments brought forward.

• **Larry Babcock**, in an invited paper, describes the artifacts and literature he presented in an award-winning exhibit at last year's AWA Conference. His theme is First World War aircraft radio, and he had much of the material on display in his 2006 exhibit.

• Reaching back more than a century, **Norwood Teague** and **Joe Knight** describe a regular commercial wireless link established in 1902! It connected the residents and visitors on Catalina Island to the community of San Pedro, both in California. This commercial service was as much a social and political achievement as a technical one, but it nonetheless had important implications for the development of radio.

• **John Anderson** describes the contributions of Henry J. Nolte to the development of General Electric's high power, metal envelope tubes. John's background comes as close as anyone's today to that of someone who "was there." He describes the challenges, among others, of making glass-on-metal seals that—once solved—led ultimately to the ubiquitous metal receiving tube.

• We have two perspectives on the history of electrical sound reproduction. One is by **John Jenkins**, and the other by **David and Julia Bart**. After some hesitation, we decided to publish both of these articles in the same issue. The articles have much in common, and it is interesting to see how different authors put their own spin on what is essentially the same history. After reading them, you can decide for yourself which approach you prefer.

• The life of Emil J. Simon, an early wireless equipment producer, is described by **Russ Kleinman, Karen Blisard, A.J. Link** and **Warren Berbit**. Simon led an unusual personal life which it makes for interesting reading. Although his wireless apparatus was not known for its high quality, he was very effective in supplying military wireless equipment contracts during World War One. Simon was an important historical figure, but received mixed reviews from his contemporaries as an engineer and a businessman.

• While searching for material on Reginald Fessenden at the Smithsonian Institution, **James O'Neal** uncovered the radio log of amateur Francis Hart. It covers the period from 1906 to 1909. The log provides insight into the operating environment of one of the very first radio amateurs, and offers sometimes scathing assessments of his peers. It includes comments on the technical innovations available in the period.

• Finally, **Charles Kirsten** uses the design of the Supreme Model 45 tube tester to illustrate the engineering virtue of the short-lived 1933 RMA tube pin standard. Its replacement by a new standard in 1934 made 1933 testers obsolete. Charles concludes that the 1934 standard was introduced not for engineering reasons but for the self interest of RCA Radiotron Co. Ltd.

This volume should certainly appeal to the wide interests of AWA members and others. Our thanks to the authors for providing the *AWA Review* with the results of their fine and thorough work.

Price is $15.00 postpaid in U.S. and Canada; elsewhere add $5.00. See order form on back page for availability and prices of previous volumes.

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